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Creating a Culture of Data-Informed Strategic Enrollment Management at a Canadian Higher Educational Institution

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Abstract

Higher education institutions are focusing significant energy to attract and retain students through strategic enrollment management (SEM). This Organizational Improvement Plan (OIP) addresses the lack of a data-informed approach to strategic enrollment management at a small Canadian university campus. Although the SEM process is complex, without a data-informed approach to SEM institutions are wasting their time and resources. This Organizational Improvement Plan used a cultural change approach as well as a combination of authentic and distributed leadership approaches to provide a solution to the problem of a lack of data-informed strategic enrollment management at Campus X. With enrollments almost stagnant for two decades at Campus X, deep change in process and institutional culture are necessary. Using existing institutional data a strong case for the urgency of change was demonstrated. To change the processes at the institution a clear change process was outlined. To change the institutional culture in a deep and meaningful fashion a longer and in-depth change process was discussed. To create deep cultural change the ethical consideration of changing institutional culture and using student data was considered. Institutions must ensure that they have the appropriate policies and procedures in place to adequately address student privacy. At the forefront of any change process are the plans to communicate. Guided by the leadership approaches of authentic and distributed, an in-depth communication plan and process was outlined to address the changes in process and to work to create deep cultural change in regard to a more data-informed approach to strategic enrollment management.

Keywords: strategic enrollment management, data-informed, cultural change, authentic leadership, distributed leadership.

Executive Summary

Higher education institutions across the globe are focusing increased efforts to recruit and retain students though the process of strategic enrollment management (SEM) (Bontrager, Ingersoll, & Ingersoll, 2012). Although institutions are focusing their efforts on enrollment management, if their efforts and decisions are not based in data they are not strategic and are often efforts in futility (Gottheil & Smith, 2011. This Organizational Improvement Plan (OIP) presents a plan to address the Problem of Practice (PoP) of a lack of a data-informed approach to strategic enrollment management at a small Canadian university campus.

Chapter 1 of this OIP, introduces the Problem of Practice being considered. An overview of the current organizational context is provided along with the leadership position and lens statement. The Problem of Practice for this OIP is the lack of a data-informed approach to strategic enrollment management (SEM) at a small Canadian university campus. The context of the problem, as well as a variety of questions that come from this Problem of Practice, are presented. A leadership-focused vision for change is presented and an analysis of the organizational change readiness is considered.

Chapter 2 moves into planning for change. A number of leadership approaches are presented, specifically authentic leadership (George, 2003) and distributed leadership (Spillane, 2005). The work of Schein (2017) is used to outline the process and need for cultural change at Campus X as a framework for leading the change process. A critical organizational analysis using Deszca, Ingols and Cawsey's (2019) Change Path Model is utilized to consider what needs to change and how. Four possible solutions to the Problem of Practice of a lack of data-informed approach to strategic enrollment

management at Campus X are then presented. The chapter concludes with a look at the ethical considerations for this change process.

In Chapter 3, a chosen solution of a yearly in-depth data analysis of institutional data is presented. The implementation, evaluation and communication of the change plan is then outlined. A detailed change implementation plan is presented as well as discussion on the need for clear monitoring and evaluation of the change process. The need for strategic and clear communication during the change process is outlined and considered. Finally, next steps and future considerations are presented.

This Organizational Improvement Plan provides a roadmap for Campus X to address its lack of a data-informed approach to strategic enrollment management; however, if Campus X is to create deep cultural change it must move beyond the solution provided in this OIP and consider a long term of implementing all of the possible solutions presented.

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As I sit here in my makeshift office in the basement of my house, while we fight the pandemic of 2020, I am reminded of what is most important: without my health and family, I would not be here today, so I am beyond grateful for both!

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Acronyms

AEM – Anticipatory Enrollment Management

CID – Center for Institutional Data

OIP – Organizational Improvement Plan

PDSA – Plan, Do, Study, Act

PoP – Problem of Practice

SEM – Strategic Enrollment Management

Glossary of Terms

Authentic Leadership - a leadership approach built on honesty, transparency and based in values

Appreciative Inquiry – a leadership approach that looks to identify what is working well and strives to bring out the best in individuals

Culture – a set of shared basic assumptions of a group

Data-Informed – a process of making decisions based on data

Distributed Leadership – a team approach to leadership

Enrollment – the number of students attending the institution

Faculty – an educator who works by teaching or conducting research within a university

Higher Education – education beyond the secondary level

Recruitment – the process of searching for and encouraging students to attend the institution

Retention – the number of students that remain at the institution from year to year

Staff – support and administrative personnel

Senior Leadership – faculty and staff at or above the Deans and Directors level holding positions of decision making at the institution

Strategic Enrollment Management – a comprehensive process that allows institutions to set, reach and maintain enrollment goals

Chapter 1 - Introduction and Problem

The Problem of Practice considered for this Organizational Improvement Plan (OIP) is the lack of a data-informed approach to strategic enrollment management at a small Canadian university campus. For anonymization purposes this campus shall be referred to as Campus X. Higher education institutions that have a data-informed focus on the recruitment, retention, program planning and student supports ensure that resources are being used effectively and efficiently (Bontrager, 2008; Bontrager et al., 2012; Gottheil & Smith, 2011). Enrollment at Campus X has not grown at the rate at which the Campus has anticipated; for years Campus X has seen a decrease in enrollment. This decrease is thought to be driven by a decrease in high school graduates in the local catchment region. As a small campus of less than 2000 students, with limited enrollment growth, Campus X has had to increase its efforts to recruit and retain students. This increased effort, however, has yielded little change in enrollment. After conducting a preliminary institutional scan it is clear that many of the recruitment and retention efforts at Campus X are not strongly based in institutional data. In fact, institutional data is often not even gathered or considered. It was also noted that Program Chairs and Deans are frequently unaware of program enrollments and program demographics. To attempt to engage in the strategic enrollment management process without utilizing data would be an exercise in futility (Bontrager, 2008; Bontrager et al., 2012; Gottheil & Smith, 2011). This OIP will work to create a culture at Campus X that has a focus on data-informed strategic enrollment management (SEM) focused on recruitment, retention, program enrollment management and student supports.

Organizational Context

The institution at the center of this OIP is a university campus located in Canada and is a campus that is a relatively young, having been founded just over 40 years ago. Campus X is part of a larger, multi-campus institution which offers a wide variety of world-class programs in a wide range of areas and sectors. Campus X is a public university which prides itself on its small campus setting while offering world class programs. In the past decade Campus X has taken great pride in the institutional growth it has seen in the areas of program development and student supports, specifically graduate programs and international student recruitment. However, these areas of growth have not resulted in the increased enrollment Campus X desired as enrollment in other areas have declined.

Campus X first opened its doors in the 1970s, with a goal to serve as a feeder campus to the larger main campus, providing students from the region access to the first year of a number of degree programs offered at the main campus. Over time, Campus X evolved to where today it offers almost 20 degree programs, including undergraduate and graduate programs. Regardless of this growth in program offerings, Campus X's enrollment has reached a plateau for almost 20 years, with the enrollment of 2001 and 2018 differing by only nine students (Campus X, 2001, 2018).

In response to the lack of enrollment growth at Campus X, the Campus attempted to focus on strategic enrollment management. In 2012, Campus X established the Strategic Enrollment Management Committee with a mandate to coordinate all elements of enrollment management at the Campus. The SEM Committee facilitated a number of important discussions around enrollment management, such as having an external

consultant conduct an analysis of the Campus's enrollment management structure. However, within just a few years of the SEM Committee being formed, and the formal report from the consultant being received, the Committee was disbanded due to the elimination of staff positions vital to the Committee and the Campus once again lacked any focus on strategic enrollment management. The SEM Committee was not producing results, in part because the culture within the Campus viewed the matters of enrollment management as the responsibility of the SEM Committee as opposed to enrollment belonging to all members of the Campus. There were also the issues of a lack of clear data, data retrieval being difficult and the data often being outdated.

Campus X has already seen an almost 5% budget reduction in each of the 2017, 2018 and 2019 fiscal years. The Campus has struggled to overcome budget issues, meaning an increase in enrollment would likely be a significant contributor to its fiscal wellness. For Campus X, the implications of not properly addressing its enrollment issues are significant and imminent. The future of the University is impacted by its ability to grow enrollment, not only as an attempt to increase the institution's financial sustainability, but to allow it to meet its strategic goals specifically as they relate to public engagement, teaching and learning and the economic growth of the province. Although the University indicates that strategic enrollment management is an institutional priority, the lack of leadership and the lack of a data-informed approach make this claim questionable.

Institutional Mission, Vision and Values. The institutional vision of Campus X is to be a distinguished public university campus in Canada, with a specific obligation to the people of its province, and a focus on teaching and learning, research, service, and

public engagement (Campus X, 2018). The values of the University are broad-reaching and cover many key areas, including excellence, integrity, accountability, responsibility to place and sustainability (Campus X, 2018). The issue of sustainability here is significant, as it refers to the Universities' environmental, economic and social sustainability. As a publicly funded institution, Campus X has an obligation to the government and the people of its province to ensure its sustainability in all these areas. With regards to this OIP, a data-informed approach to strategic enrollment management would ensure institutional accountability and sustainability, while aligning with the key values of the University.

Institutional Goals. Both the University as a whole and Campus X have been undertaking strategic planning exercises during the past year. Campus X's strategic plan outlines increases in enrollment, but there is no mention of how those goals will be met nor with whom the responsibility lies to meet those goals. The University as a whole is also undergoing a strategic enrollment management plan process. This plan has also yet to be released and there has been limited input from Campus X on the larger institutional enrollment plan as Campus X was awaiting the release of its own strategic plan to guide their enrollment goals. Although strategic plans and enrollment plans have significant value, if they are not accompanied by an implementation plan, they lack value. As Taylor and Miroiu (2002) state "the whole planning process is worthless if the plans are not implemented. The plans must therefore lead to clear targets and actions with clearly assigned responsibilities" (p. 65). It is clear the University and Campus wish to ensure sustainability in terms of enrollment; however, it is not clear how the University or Campus will ensure the process is effective.

Organization Structure and Current Leadership Approaches. At Campus X, my position is located within the Registrar's Office. I have direct responsibility in the areas of academic advising, conversion (i.e., converting applicants to registrants), as well as assistant registrar duties. As a small campus, those within the Registrar's Office have many responsibilities and with the elimination of the Associate Registrar Systems position many of the questions around institutional data fall to the Registrar or myself. I sit on several different faculty-based committees where program recruitment and retention are a point of interest. With very little leadership in the area of strategic enrollment management, and the recent addition of both Student Services and Student Recruitment to the Registrar's portfolio, there is an opportunity for Campus X to engage in a meaningful SEM process. A lack of attention to the SEM process can result in dissatisfied students, low enrollment, poor reputation and wasted financial and human resources (Bontrager et al., 2012).

In 2016, Campus X moved from an informal campus structure to a formal decanal system. During this period of change, and shortly thereafter, Campus X also underwent a number of significant budget cuts, cuts which resulted in the elimination of a number of senior leadership positions, including Associate Vice-President Academic, Associate Vice-President Administration and Finance, Facilitator of Internationalization, Director of Student Services and Manager of Student Recruitment. The Campus has also seen the portfolio of the Registrar and the Director of Facilities Management greatly expanded. These changes have resulted in a much narrower funnel with regards to senior leadership than what the Campus had been used to.

The leadership approach that is most predominant at Campus X is a bureaucratic approach, which Manning (2017) outlines as being "top-down, rule bound, fixed on the one best way, slow to change and isolated from the environmental context" (p. 183) Although this approach can be useful in many situations, its current execution at Campus X is not working to serve the Campus as it should. For instance, in the absence of consultation and data informed decision-making, bureaucratic decisions made by senior administration at Campus X lack authority and appear indiscriminate when they are subsequently undone when challenged by vocal critics. Although all individuals are given an opportunity to have a voice, those with institutional sway and strong, powerful institutional voices are often heard the most. This sends conflicting messages to faculty and staff as to what senior leadership views as important and values, it adds confusion to the direction of the Campus and it creates doubts in leadership's ability to make the right decisions. To implement this Organizational Improvement Plan, my leadership position must be well thought out as it relates to the Problem of Practice.

Leadership Position and Lens Statement

How one chooses to approach a leadership problem can vary based on one's individual view of the problem being addressed, as well as one's individual beliefs and values (Stogdill, 1974). I will be addressing the current Problem of Practice through an organizational culture perspective, introduced by Schein (1983, 2017), which focuses on how institutional culture is created, and reconstructed to allow for institutional change. Schein (1983, 2017) explains that leaders must first understand the institutional culture, and the unspoken influences, before they attempt to change culture. In addition to Schein's organization culture perspective, an authentic leadership approach focusing on

being an authentic leader (George, 2003), and a distributed leadership approach, focusing on shared leadership (Spillane, 2005), will also be utilized. These approaches will be supplemented with appreciative inquiry which focuses on asking the right questions of the right people to tap into their skills and knowledge (Cooperrider, 1987). This combined approach allows for my individual views of the problem, beliefs and values to be upheld and recognized. A focus on cultural change will enlighten me as a leader to work within the institution to ensure that the desired changed is long-lasting and runs deeply within the institution (Schein, 2017). While the literature is not consistent on the definition of organizational culture perspective for the purposes of this paper I will embrace the anthropological framework of organizational culture theory, in which all members of an organization play a vital role in shaping the organizational culture and play a part in how the organization constructs meaning based on the individual and collective experiences of its members (Manning, 2018).

The goal of this Organizational Improvement Plan is to create a culture of a data-informed approach to strategic enrollment management (SEM) at Campus X. This type of organizational change will be difficult and will take time because when considering the change process there are many significant concerns. At the forefront of those concerns will be the differences that exist within the institutional culture of faculty and staff. Considering the Problem of Practice, the change required will have direct impact on both faculty and staff. The approach taken, however, may have to differ based on the subcultures within the organization. Considering the driving force behind this change will be myself, a staff member—and the institutional culture at Campus X is one where change among faculty needs to be faculty-driven—a change champion or change agent

within faculty will need to be recruited early in this process to help offset the cultural issues that exist between faculty and staff. Schein (2017) outlined how culture within higher education is created and cultivated by the language and symbols used by its members, the institutional history and traditions, the values and assumptions and the subcultures. As the individual leading this change I must consider each of these aspects when attempting to engage in cultural change at Campus X. The desired outcome of this OIP is to embed within the culture of Campus X a data-informed approach to strategic enrollment management and to do so will require an understanding of how cultural change takes place. From a leadership standpoint, the goal is to foster cultural change at Campus X to ensure all decisions pertaining to enrollment are based in data.

Kezar (2014) showed that with a cultural approach to change the specific outcome of the change process is a new culture. Changing an institutional culture can be a long, slow, and often difficult process. As the change agent leading this path to change, I must be prepared for the slow evolution of change that is anticipated in a cultural approach (Kezar, 2014).

Understanding the current culture at Campus X is key to understanding how to move forward and evoke deep cultural change. The current culture at Camps X is one of distrust, even resentment, of the current leadership. Considering this, and the varying approaches to leadership, an authentic leadership approach is viewed as the most likely to result in deep cultural change. Although there are varying definitions of authentic leadership, for the purposes of this research the definition presented by George (2003) will be utilized. George defined an authentic leader as someone who is a genuine person,

who remains true to what they believe in. They work to understand the purpose of their leadership and they lead by their values.

Complementary to an authentic leadership approach is the idea of appreciative inquiry which considers what is working well and what is not, and working to improve the organization by asking the right questions of the right people (Cooperrider, 1987). Appreciative inquiry would prepare me as a leader to work to create positive change within the Campus by tapping into the positive knowledge, skills and stories to motivate and drive change (Cooperrider, 1987; Cooperrider & Whitney, 2005; Orr & Clevland-Innes, 2015). There are several things Campus X does well and many areas it need to improve on related to the SEM process. Appreciative inquiry will facilitate discussions on these matters and allow an opportunity for those who have skills and knowledge in the areas vital to the SEM process to have a voice and be actively engaged in the process.

Based on the cultural lens (Schein, 2017), complemented by a theoretical approach of authentic leadership (Eagly, 2005; George, 2003; George and Sims 2007), and supplemented by appreciative inquiry (Cooperrider, 1987), the result of this OIP should be a significant transformation of Campus X, specifically as it relates to culture, for the purpose of implementing a successful data-informed strategic enrollment management plan.

Although an authentic leadership (George, 2003) approach to this Problem of Practice is seen as necessary and vital when considering the current culture at Campus X, this approach should be augmented with a team style approach to ensure significant integration of the change within the culture of Campus X. A distributed leadership approach would share interactions among leaders within the organization to overcome the

problem at hand (Spillane, 2005). Distributed leadership is more than ensuring a group of leaders each executes their responsibilities as they relate to the change; it moves beyond the idea of shared leadership (Spillane, 2005). The cornerstone of distributed leadership is that it is based on the interactions of leaders, followers and the problem/situation. Each of these elements is vital for successful leadership practice (Gronn, 2000; Spillane, 2005). Because distributed leadership has its basis in interpersonal interactions (Gronn, 2000; Spillane, 2005), it is complementary to authentic leadership, which also has its basis in interpersonal interactions (George, 2003; George & Sims, 2007). For Campus X to fully engage in a data-informed approach to strategic enrollment management and embed the data-informed strategic enrollment management process into the culture of the Campus, collaboration among faculty, staff, departments and programs will be essential. Distributed leadership sees collaboration and interactions between individuals as the driving force for change (Spillane, 2005). From a distributed leadership approach, when the problem is viewed from the lens of interactions as opposed to actions, it allows for successful collaboration that results in positive results (Spillane, 2005). Spillane (2005) pointed out that "a distributed perspective on leadership is best thought of as a framework for thinking about and analyzing leadership" (p. 10). Distributed leadership takes into consideration institutional structure, culture, and gives followers a significant voice in the discussion regarding the problem (Spillane, 2005).

Considering this Problem of Practice, a distributed leadership approach disperses ownership and responsibility among faculty and staff within the institution. It encourages collaboration and works to ensure that positive interactions are at the center of change.

For Campus X this approach, along with an authentic leadership approach, gives great likelihood for success in overcoming this Problem of Practice.

Leadership Problem of Practice (PoP) – What is the Problem?

Higher education institutions across the globe are focusing more and more on strategic enrollment management efforts (Black, 2010; Gottheil & Smith, 2011; Hassler & Bontrager, 2015; Wilkinson et al., 2007). The literature, however, tells us that in areas such as student retention, rates have often remained stagnant (Habley et al., 2012). Student retention is a key aspect of SEM (Bontrager, 2008; Bontrager et al., 2012), but it is not the only aspect. Strategic enrollment management is a complex and lengthy process that institutions often undertake with ambitious goals pertaining to recruitment and retention but lack the basis in institutional data (Bontrager et al., 2012). The literature on strategic enrollment management is clear: institutions cannot undertake a SEM process if they do not take a data-informed approach (Bontrager, 2008; Bontrager et al., 2012; Gottheil & Smith, 2011). Institutions that undertake a data-informed approach to strategic enrollment management are significantly more likely to meet enrollment goals, and predict future enrollments (Gottheil & Smith, 2011). The Problem of Practice considered here is the lack of data-informed strategic enrollment management at a Canadian university.

Often, institutions work on goals to grow enrollment and do so with limited planning time, yet with the anticipation that enrollment growth will happen almost immediately (Bontrager et al., 2012). The key to any good SEM plan is good institutional data (Bontrager, 2008; Bontrager et al., 2012; Gottheil & Smith, 2011). The key here is not the amount of data, but the accuracy of the data (Bontrager et al., 2012).

If institutional data is flawed, then the strategic enrollment management (SEM) efforts formulated from that data will also be flawed (Bontrager et al., 2012). To ensure the data is good data, institutions must ensure that they have a significant understanding of what data is being collected, how it is being stored and for what purpose it is being used (Bontrager et al., 2012; Young & McConkey, 2012). This is an area that many institutions are lacking in policies, procedures and general understanding (Prinsloo & Slade, 2014). Consequently, such institutions risk wasting significant time and effort on reviewing institutional data and wasting significant resources on executing recruitment and retention activities which are based on data that lacks value and accuracy (Bontrager et al., 2012; Gottheil & Smith, 2011).

Moving an institution to a data-informed SEM process is a complex and lengthy process (Bontrager, 2008; Bontrager et al., 2012; Gottheil & Smith, 2011). Changing an institutional culture to adopt and embed within it the new complex process will likely take significant time and effort. However, it offers the greatest likelihood of institutional success with regards to strategic enrollment management (Gottheil & Smith, 2011). To best address the Problem of Practice an understanding of the context in which the problem exists is necessary.

Framing the Problem of Practice

To provide a contextual basis for the Problem of Practice a historical overview of strategic enrollment management as a process, as well as the history of strategic enrollment management at Campus X, is discussed. To provide additional context the political, economical, social, technological and environmental factors (PESTE) that impact Campus X will be considered.

Historical Overview. Strategic enrollment management (SEM) has become a vital part of leadership roles in higher education across the globe (Bontrager, 2008; Bontrager et al., 2012; Gottheil & Smith, 2011; Hossler & Kalsbeek, 2008). SEM leads higher education institutions to engage in their strategic goals in a more informed, intentional and integrated way (Hossler & Kalsbeek, 2008). Although the definition of SEM has evolved over time, and there are a variety of accepted definitions, one of the most widely accepted is "a coordinated set of concepts and processes that enables fulfillment of institutional mission and students' education goals" (Bontrager, 2008, p.18). To provide a greater understanding and a more in-depth analysis of SEM, Hossler and Bean (1990) defined SEM as

> an organizational concept and a set of systematic activities designed to enable educational institutions to exert more influence over their student enrollments. Organized by strategic planning and supported by institutional research, enrollment management activities concern student college choice, transition to college, student attrition and retention and student outcome. (p. 5)

The research on strategic enrollment management is clear: a SEM process will be neither successful nor effective without the appropriate use and analysis of institutional data (Gottheil & Smith, 2011).

The process of SEM will allow Campus X to see how it is perceived by prospective students, understand the ideal students and markets to pursue when recruiting and explore why students do or do not matriculate and progress to graduation (Hossler & Kalsbeek, 2008).

Enrollment management began to appear in institutional research and literature in the early 1980s as a response to declining enrollments and decreasing resources (DeCristoforo, 1996). At that time, Hossler (1984) defined enrollment management as an institutional endeavor to manipulate the number, mix and quality of students through recruitment and retention strategies. Hossler concluded that

> well conceptualized plans to manage enrollment can lead to a better institutional self-understanding and an enhanced institutional health and vitality. With adequate information about the institutional environment and sufficient data about the actual and potential markets of a college or university, enrollment managers may indeed be able to influence college choice effectively. (p. 148)

Historically, research has shown that there is a significant need for institutions to be able to use institutional data to be responsive to declining student enrollments and increased institutional financial stress (Glover, 1986).

Higher education institutions have been engaged in data collection and data analysis processes for decades; however, it has become evident that institutions often lack the capability and know-how to appropriately use the collected data in a manner which advances student learning and improves student outcomes and success (de Freitas et al., 2015). In recent years, a more in-depth understanding of the need for a data-informed approach to SEM has emerged, as noted by de Freitas et al. (2015):

> The move of universities, e.g., towards a more service-centered ethos often driven by rising costs of education and the introduction of student fees, has created an environment in which data has taken on an increasing value as a proactive tool for ensuring student recruitment, for lifting the quality of service delivery. (p. 1176)

The shift to a more data-informed approach emerged out of necessity, due in part to the evolution of the view of students more as consumers of higher education (Backes & Gunn, 1992). Therefore institutions are using business analytics, such as key performance indicators, as measures of success specifically in the area of student recruitment (Gottheil & Smith, 2011).

One of the major misconceptions regarding SEM is that it is simply an approach to admissions, marketing, and student supports (Bontrager, 2008). It goes much deeper than that; SEM, when done right, orchestrates a fundamental change in the manner in which institutions think and act with regards to enrollment (Bontrager, 2008).

As research and discourse in higher education began to progress in the area of strategic enrollment management (SEM), it was complemented with research and discourse in the area of student persistence/retention. Often referred to as the founder of student retention theory, Tinto's (1987) *Leaving College* provided a theoretical paradigm that postulates the reasons students do not persist in higher education. The work in the area of student persistence/retention cannot be ignored when discussing SEM, as student retention is a key component to a successful SEM process (Gottheil & Smith, 2011). Understanding the complexity of the SEM process is vital to ensuring success because, when done properly, SEM involves a strategic process involving data analytics. Student retention is a key component to SEM, but one that is often overlooked or undervalued (Gottheil & Smith, 2011). Bontrager (2008) outlined the key aspects of the SEM Process (Figure 1), where institutions proceed through four key processes of developing enrollment goals, identifying enrollment investments and measurable outcomes, tracking enrollment outcomes and creating reinvestment strategies. This process involves a

complex reflection and evaluation of the institution at each step. The process presented by Bontrager (2008) is a circular one, so when the fourth phase is reached it cycles back to phase one or two and undertake the process again, continually evaluating and reflecting on the success and the institution. It is vital that Campus X understand the SEM planning model and the SEM process before embarking on this change process, as these ideas are new, and a greater understanding will lead to greater success.

Figure 1. The SEM Planning Model. Adapted from Bontrager, 2008, p.62- 68.

For Campus X, the idea of strategic enrollment management is fairly new. For many years the Campus was happy with its small size and there was no major pressure, internally or externally, to grow enrollment; the growth of enrollment happened very naturally. However, as with the current higher education environment in Canada and globally, institutions are competing more and more for students (Gottheil & Smith,

2011). Coinciding with the global increased competition for students, the provincial government was experiencing a time of wealth and it invested heavily in Campus X. This investment resulted in new programs, significant increases in the number of faculty and staff employed at Campus X and significant funding for student supports and recruitment. The increased funding in areas of student supports and recruitment led to a mindset on campus that recruitment and retention were the responsibility of those namesake departments, as they now had significant recourses. This period of provincial wealth did not last and within a few short years Campus X was cutting programs, laying off faculty and staff and making cuts to student supports and recruitment. The mindset of faculty and staff, nonetheless, did not change, so staff and faculty often remained disengaged with the recruitment and retention process.

PESTE Analysis. An analysis of the political, economical, social, technological and environmental (PESTE) factors influencing Campus X provides a contextual basis on the factors that impact Campus X and its advancement towards a more data-informed approach to strategic enrollment management (Carr & Nanni, 2009). This analysis allows for a greater understanding of Campus X's ability to evolve and change in the area of strategic enrollment management and what factors may be positively or negatively impacting that change.

Political/economic factors. The position in which Campus X finds itself is unique with regards to political influence. As part of the institutional values, the University has a responsibility to place, specifically—a responsibility to the people of the province in which it is located (Campus X, 2018). Also embedded within the institutional values is accountability to the people of its province and to government. As

a publicly funded university with a government grant in excess of 30 million dollars annually, the political influence on the University, including Campus X, is heavy. Due to increased spending, and what is viewed as stagnant enrollment, government has been swift in its response: the most recent cut to the University's operating budget was a steep 9 million dollars. Government has made it clear to the University that it has to find ways to save on costs and/or increase revenue. The present Problem of Practice has a direct impact on the University's revenue. Closing the gap in relation to a data-informed strategic enrollment management approach would strengthen the University's ability to ensure greater utilization of its resources in a more effective and efficient manner with the goal being an increase in student enrollment and thereby an increase in tuition revenue (Bontrager, 2008; Gottheil & Smith, 2011).

Social factors. Social factors must be considered when discussing a data-informed strategic enrollment management approach at Campus X. A major concept in SEM is ensuring a proper fit (Bontrager et al., 2012), ensuring that the institution is recruiting the 'right' students, students who are looking for the type of experience and education Campus X has to offer. In 1987, Tinto presented his student retention theory. This historical perspective on retention has withstood the test of time and is still widely studied and applied in higher education today. Tinto's (1987, 2007) student retention theory views social integration as a key aspect of student retention. Campus X has experienced significant growth with regards to international student enrollments however, Campus X is seeing only a small number of those students retained to graduation. Due to the increase in international enrollments, Campus X is also seeing new and emerging needs for student support services, needs that were not identified in the past due to

Campus X's relatively homogenous demographic. An appropriate data-informed approach to strategic enrollment management would arm Campus X with the relevant information to ensure the proper 'fit' for the students while addressing the retention issue through effective supports (Black, 2010).

Technological factors. Considering this Problem of Practice, Campus X would need to consider technology from a multifaceted approach. First, the Campus must ensure it has access to useful and appropriate data—but having access to data is not enough; it needs to know what data has been collected, what it means, how to access it, and how and when to analyze it (Bontrager et al., 2012). Campus X must ensure there is a structure in place to collect, store, and access data. This is best accomplished through the use of technology (Prinsloo & Slade, 2014). Furthermore, technology plays a vital role in both the understanding and delivery of higher education. Students today are digital students, with digital expectations. Higher education institutions must, at a minimum, keep pace with where the students are with regards to technology. Campus X would need to determine, as part of its retention efforts, whether the technology utilization on campus is meeting the needs of its current and future students.

Environmental factors. External and internal environmental factors are at play with regards to the present Problem of Practice. Campus X's environment is currently not one where change is welcomed. Employees are resistant to taking on additional responsibilities that are not 'in their job description,' creating an environment where strategic enrollment management is not part of anyone's job description, so it lacks ownership. As well, external environmental factors play a significant role. The largest catchment area for enrollment for Campus X is the high school graduates from the local

region; however, this population has been on a steep decline for years. According to the Provincial Government, in 2008-2009 academic year, there were just over 6000 grade 12 students, and ten years later, in the 2018-2019 academic year, there are under 5000 grade 12 students; based on the grade 2 enrollments of 2018-2019, the forecast for the 2028-2029 academic year predicts the number of grade 12 students to drop to 4,600 (Government of Province X, 2018). The high school enrollment number will have a direct impact on Campus X's enrollment, contributing to an environment where Campus X will have to be more creative—namely, more strategic—in its enrollment efforts. Bontrager (2012) observes that institutional enrollments are directly impacted by declines in local and traditional recruitment areas, and that institutions must have a plan to respond to these declines. A number of questions arise based on these challenges.

Guiding Questions Emerging from the Problem of Practice

As Campus X moves through the process of addressing this Problem of Practice of a lack of a data-informed approach to strategic enrollment management (SEM), several key guiding questions will emerge. It will be vital that Campus X is willing to address these questions in an effort to create the greatest likelihood of success.

Question One: What is the institutional capacity and base standard of service for student supports? First and foremost, Campus X must undergo an in-depth institutional scan to consider the questions of capacity and standard of service. A significant aspect of SEM is that of student retention (Black, 2010; Gottheil & Smith, 2011), so if Campus X does not set a standard of service, and understand what their capacity is in terms of meeting those standards of service, then they risk an unfavorable

result in regards to student retention. As Bontrager et al., (2012) indicate if Campus X does not meet students' expectations then they risk losing those students.

Question Two: What policies, processes and procedures does Campus X need to develop for the collection, storage and usage of student data? The SEM process is seen as an exercise in futility if it does not involve deep collection, analysis and utilization of institutional data (Black, 2003, 2010; Bontrager, 2008; Bontrager et al., 2012). Academic data analysis has emerged as part of the digital era, where data can be easily collected, stored, and utilized (Baepler & Murdoch, 2010). Many organizations are using data to make better institutional decisions about their strategic direction (Baepler & Murdoch, 2010; Daniel, 2015). Much of the focus on data in higher education now is focused on the actions that institutions can take based on real-time data and predictive data (Baepler & Murdoch, 2010). However, institutions must ensure that they first have the appropriate policies and procedures in place before using institutional data (Prinsloo & Slade, 2014; Young & McConkey, 2012). Without the appropriate policies, institutions risk breaching students' privacy or risk ethical violations (Prinsloo & Slade, 2014). Before Campus X can successfully use student data, current policies on the usage, storage, management and analysis of the data must be evaluated. The collection, management and analysis of student data have and continue to be a growing trend in higher education (Kruse & Pongsajapan, 2012; Pardo & Siemens, 2014; Prinsloo & Slade, 2013). Higher education institutions need to be using student data as a driving force in strategic enrollment management efforts. Campus X must be able to clearly define student privacy as it relates to student data and must have a clear understanding of who owns the student data (Prinsloo & Slade, 2013, 2014). Although higher education

institutions are often blanketed with multilayers of policy related to privacy and data management, the literature clearly shows a specific need for greater defined policies related to the use of student data for institutional advancement (Kruse & Pongsajapan, 2012; Pardo & Siemens, 2014; Prinsloo & Slade, 2013).

Question Three: Why has Campus X lacked clear leadership in the area of strategic enrollment management? Campus X needs to investigate why there has been such limited leadership or focus on strategic enrollment management. Bontrager et al., (2012) explain how for strategic enrollment management to be successful, active and engaged leadership is required and a clear understanding of SEM as a share responsibility is necessary. Although leadership recognizes the importance of SEM, they have not coordinated strategic efforts to engage the Campus in the process. Campus X and its leadership recognizes the impact of declining enrollments and the importance of working to counteract the decline, yet there is a lack of ownership or leadership with regards to strategic enrollment management. The Campus must ask why this is and what they are willing to do about it. If Campus X is not aware of why its past mistakes were made, it risk making the same mistakes in the future.

It would also be remiss if questions were not asked regarding why many of the deep institutional cuts happening at Campus X over the past few years are in areas directly related to strategic enrollment management. This includes the elimination of a Director of Student Services, the Manager of Student Recruitment position being left vacant, elimination of the Facilitator of Internationalization, and the elimination of the only position responsible for data analysis, the Assistant Registrar—Systems. For change to be viable, an understanding of the vision for change is necessary.

Leadership-Focused Vision for Change

Before embarking on a change process a leader must have a clear vision of the change they hope to accomplish (Ruben et al., 2017). Understanding where Campus X currently sits in relation to a data-informed approach to strategic enrollment management and having a clear vision of the future state of Campus X will allow for greater understanding of the desired change at the end of this change process. An understanding of the priorities of the change process and who will help to drive that change will allow for a greater focus on the process, resulting in a greater likelihood of the desired envision state being accomplished.

Organizational State. To provide an understanding of the envisioned future of Campus X as it relates to a data-informed approach to strategic enrollment management, the present state must first be considered. Campus X must understand the present state and how past decisions regarding strategic enrollment management have impacted enrollment, allowing for an appropriate and effective plan to meet the goals of the envisioned future state.

Present state. Currently at Campus X, there is no active engagement with a strategic enrollment management process and no focus on institutional data. The practice of SEM in Canada and the United States has been driven by institutional funding cuts, lack of revenue, increased reliance on tuition and a significant shift in demographics (Gottheil & Smith, 2011). All of these factors are at play at Campus X and require campus wide attention if the Campus wants to be sustainable. Current and past leadership have verbally indicated an interest in the matter and have communicated their understanding of its importance and relevance to Campus X's future. However, the

actions taken by the Campus leadership do not mirror that understanding. Since approximately 2017 the formally established SEM Committee has been inactive with some of the positions on the Committee (i.e., Director of Student Services and Manager of Student Recruitment) having been eliminated and other positions seeing high turn-over. Campus X also saw the elimination of the only data management person, an Assistant Registrar – Systems, in August 2019. With strategic enrollment management having its basis in four key areas—data, student recruitment, student retention and student support (Gottheil & Smith, 2011)—it is clear by the actions of Campus X leadership that strategic enrollment management in any capacity is not understood. The purpose of SEM is to achieve institutional enrollment goals in an effective and efficient manner. This is accomplished by establishing clear goals on the number and type of students needed to meet the institutional plan. By promoting academic success through strategic and targeted access and supports, and promoting institutional success through effective strategic and financial planning, Campus X can create an environment where decisions are data-informed (Bontrager et al., 2012; Gottheil & Smith, 2011)

The lack of understanding by current leadership creates a state where the proposed strategic plan outlines enrollment growth, yet the cost-saving measures are directed towards those positions which would be key in fostering that growth. There is a clear disconnect between the goals outlined in the strategic plan and the actions currently executed.

Recognizing that the future success of Campus X, as with most higher education institutions, is based on its ability to strategically manage its enrollment, creating a

culture where data-informed SEM is embedded in the culture will enable the institution to move forward regardless of who is 'at the top.'

Envisioned future state. The ideal future state of Campus X is one where the Campus is clear on its institutional data with regards to what data is being collected, how it is being stored and how it is to be utilized (Bontrager et al., 2012; Young & McConkey, 2012). It would be a campus where decisions relating to student recruitment, student retention, student supports and academic programming are based in credible institutional data. Without basis in institutional data, attempts at enrollment management are no longer strategic (Gottheil & Smith, 2011). Furthermore, it would be a campus where all members of the faculty and staff would view enrollment management as an important aspect of their role within the institution and see the value of understanding and utilizing institutional data in their own decision-making processes. Ideally, Campus X would become a campus where a series of vital questions related to strategic enrollment management becomes the lens through which all issues are considered—questions such as: what is the Campus's capacity? What does the data say? How will the Campus measure its success?

With this approach to SEM, Campus X can be actively engaged in shaping its future, ensuring not only that it is able to sustain and grow its enrollment, but that it will be able to have input on what that growth will look like in regards to growing specific programs, specific demographics of students, etc. Gottheil and Smith (2011) concluded that SEM allows for institutions to be strategic in its growth and future and to respond appropriately to changes that take place in demographics.

Change Drivers. When considering this Organizational Improvement Plan I must consider my place within the organization as a change leader. In my current role within the Registrar's Office, I work directly in the areas of converting applicants into registrants and I work closely with student recruitment. Although there are limited institutional enrollment goals set, I work with the Campus Registrar to understand the current student demographics. I also sit on several high-level faculty committees that deal with student appeals, as well as program/school recruitment and retention. Having spent almost two decades working at Campus X, in the areas of Student Recruitment and Student Services, I have a historical knowledge of the University and Campus, as well as work closely with both faculty and staff.

The notion that in order to drive change within an institution, an individual has to be in a senior administration position, is outdated. Eddy, Garza Mitchell, and Amey (2018) considered the hierarchies within higher education in terms of higher education leadership and they identified not only the need, but the success of having individuals 'lead from the middle'. Eddy et al. (2018) suggested that those employees who are in mid-level leadership roles are in unique positions to drive change within their institution, specifically due to their awareness of the current issues and culture among staff. Leaders of institutional change can be found at all levels of the institution (Eddy et al., 2018; Kezar, 2014); however, in my role as a mid-level staff member, I am in a unique position to lead from the middle. This would effect change by those individuals who will also be responsible for executing the change, as opposed to the typical change style at Campus X, where directives are issued from the top down and implemented from the bottom up. As Morgan (1997) observed, without the appropriate support of those individuals who are

expected to enact the change, the change process will be difficult. For this OIP to be successful, understanding which staff and faculty need to be involved, and that all members of Campus need to understand the importance of this process, will be vital. This process will not be successful without significant involvement from both faculty and staff. Strategic enrollment management is based in student recruitment and retention (Bontrager et al., 2012) with retention involving all areas of student supports (Tinto, 1987). For a small campus like Campus X, this would involve the majority of faculty and staff; however, it will be important to ensure that those in senior leadership positions are on board with this process first, to ensure appropriate supports from senior leadership are in place. As Bontrager et al. (2012) states for strategic enrollment management "support from the top is an advantage" (p. 225).

The change process, however, will not be possible without dedicated change champions. When the change management approach is considered, and for the conceptual framework to be identified, the environment in which the Campus is operating must first be understood (Napier, Amborski, & Pesek, 2017). Ensuring that the Campus is ready for change, that staff are on board with change, and that there is a clear plan on communicating and driving change will be vital to the success of this OIP. These questions must first be addressed through an intensive organizational scan because the Campus cannot view change as a specific start and end; change is a process, ongoing once it starts, as it is embedded in a cultural shift (Morgan, 1997). The need to reconsider the data, the data mining process and the data communications will be ongoing for as long as a data-informed approach is used. Therefore, there is no 'end' to this change; it is more an evolution.

Tools and Practices to Drive Change. The change proposed in this Organizational Improvement Plan will be lengthy and often difficult. Although the primary goal of the OIP is to create a culture of data-informed enrollment management, the secondary goal of increased enrollment may be more likely to be used as the motive to drive change, as the primary goal is less likely to attract people to engage in this process. The lengthy process of cultural change at Campus X is anticipated to be met with cynicism. If, however, the secondary goal of increased enrollment is the 'carrot' to attract individuals to engage in the process there is increased likeliness of institutional engagement in the process as it directly impacts all employees with regards to job security.

Recognizing that there is a divide between faculty and staff at Campus X and recognizing my position within the University as a staff member, it will be vital for the success of this change to find a change agent. Morgan (1997, 2006) indicated that the unwritten powers that exist within an organization need to be identified, and to utilize that power. Specifically, an individual faculty member should be identified one who may not possess any 'power' from a human resource standpoint but possesses power from the standpoint of how they are viewed, respected and revered by their peers. Morgan (1997, 2006) considers these people agents of power and to evoke the greatest institutional change they must be utilized. These agents of power are often very powerful with regards to influencing their peers and are often given the opportunity to discuss matters in an open discourse. Considering the present Problem of Practice, faculty members will be the key players in supporting a campus culture of data-informed strategic enrollment

management, and key players in ensuring it is mobilized across the Campus, within all faculties.

Kotter (1996) proposes that the biggest mistake made when attempting to change an organization is to move ahead without establishing a real sense of urgency within the organization. Communicating urgency would not be difficult at Campus X. Presenting the current institutional data on enrollment and retention, along with regional recruitment demographics, supplemented by the literature on the importance of strategic enrollment management as well as recent budget cuts and the consequent elimination and re-structuring of employment positions represent tangible evidence of the urgency for sustainable strategic enrollment management. In the past, attempts at strategic enrollment management have suffered from what Kotter (1996) calls low credibility committee; that is, administrations are eager to make change but often lack the knowledge and power to do so. Campus X must ensure that there is a sense of urgency and the team leading the change is credible, knowledgeable and given the authority to drive change.

A key tool to understanding and driving this OIP is the institutional data. One cannot adopt the need for a data-informed approach to strategic enrollment management without a clear understanding of the data. Campus X cannot engage in the SEM process without ensuring it is collecting, analyzing and utilizing appropriate data. As Campus X prepares for this change process, an understanding of the institutions change readiness is vital.

Organizational Change Readiness

When Campus X opened its doors over 40 years ago its primary goal was to serve as a regional campus for students to spend a year or two before moving onto the main campus. Over time, Campus X evolved to where it now offers almost twenty-degree programs at the undergraduate and graduate levels. With this growth and change came the need for the Campus to begin to consider areas such as student recruitment and retention. Although significant effort has been placed in the area of student recruitment, the Campus lacks the knowledge of how to more appropriately manage its enrollment though a strategic data-informed process. Campus X has had, and continues to have, optimism with regards to its enrollment yet it has done very little to be strategic in the process. There is great potential at Campus X; over two decades ago I was a student here and have worked here ever since. I have seen great opportunity for growth and I have seen many great opportunities missed. Campus X must undergo a significant change process to ensure it can meet its institutional goals with regards to enrollment.

Assessing Cultural Change Readiness. The Problem of Practice presented in this paper considers the need for a cultural change at Campus X as it relates to a data-informed approach to strategic enrollment management. Understanding an institutions readiness for cultural change is multifaceted and complex.

Schein (22017) offers a ten-step model to assess cultural change, and the readiness of an organization for such cultural change. Schein's ten-step model clearly outlines how best to access cultural change and cultural change readiness as it relates to this PoP and Campus X (see Table 1). The ten-step process allows Campus X to not only understand how prepared and ready the Campus for the cultural change process, but it

will also allow usage of the same tool to monitor and access the cultural change process and to be able to gage how successful the change process is in creating deep cultural change. In regards to his ten-step process for assessing culture, Schein (2010) stated, "the process that I will describe is designed to give the leaders of a change process a rapid way of deciphering elements of their own culture so that they can assess its relevance to their change program" (p. 315).

Table 1

Implementation of Schein's ten step model to monitor and access cultural change in this change implementation process

Steps	**Description**
Obtain Leadership Commitment	Acquire the support of the Campus Vice President
Select Group for Self-Assessment	Group should be comprised of faculty and staff, with new and senior members of each, including some people in leadership roles. Group should be no more than 30 people, and each person should be involved in institutional decisions (departmental, school, or campus)
Select Setting for Group Assessment	Ideally, the setting needs to be comfortable and promote discussion, with space for large discussion and small breakout areas for group discussions.
Explain the purpose of group assessment	Outline the problem that has been attempted to be addressed, and post within the room. Campus VP should give a welcome and indicate the importance of the change, then exit the room to allow for open discussion.
Explain how to think about culture	Explain to the group about institutional culture and how to think about it. Explain what artifacts and espoused values are.

Elicit Descriptions of the artifacts	Small groups may work best here; have each group record on flip charts. Have prompts such as "dress codes, physical layout, usage of time and space" ask "what is going on here?"
Identify Espoused Values	Artifacts often lead to espoused values, using the small groups and flip charts ask "why are you doing what you are doing?" Have prompts such as "what is valued at Campus X?"
Identify Shared Assumptions	Do shared assumptions overrule the artifacts and espoused values? What assumptions do staff and faculty make?
Identify Cultural Aids and Hindrances	Take the list of shared assumptions and evaluate how they aide or hinder the goal.
Decisions and Next Steps	How to continue the momentum of the aides and overcome the hindrances?

Note. Adapted from Schein's (2017).

In the context of this Problem of Practice, Campus X must also consider how appropriate the change is; it must work to create urgency for the change, understand the implications of data utilization, and be prepared to address the concerns that arise. Below the organizational change readiness of Campus X will be considered through four lenses.

Appropriateness of Change. Campus X has a strong need to change. The discourse on campus, along with the institutional data, all tell us that if Campus X is to grow in terms of student enrollment then change is necessary. Increasing student enrollment increases employee job security and presents greater opportunity for advancement, which would be a far cry from the current state of job loss and personnel cuts. A greater focus on data-informed strategic enrollment management will enable Campus X to more successfully fulfill its mission to serve the Province and provide greater sustainability and accountability within the University.

Building Urgency. Creating a sense of urgency within the institution is seen as the first step in leading the change process (Deszca, & Ingols, Cawsey, 2019; Kotter, 2012). This sense of urgency is seen as an awakening stage, where those within the institution see the need for change as real and important (Deszca et al., 2019). If most employees do not view the status quo as unacceptable, the likelihood of a successful change is diminished (Kotter, 2012). This sense of urgency within Campus X is, in many ways, already present with many staff and faculty members agreeing that something must change. The issues that exist at Campus X are the lack of leadership and lack of appropriate knowledge to drive the change. Providing a clear picture of the past decade of enrollment at Campus X, specifically enrollment within programs, will enhance the previously established concerns over the future of enrollment at Campus X.

Utilizing Data. Understanding and utilizing internal and external data allows those within the institution to understand the need for change and works to create a sense of urgency for the organization to change (Cawsey et al., 2016). Considering this Problem of Practice is based on a lack of a data-informed approach to strategic enrollment management, it may be necessary to first display the current practice of not utilizing data. Programs at Campus X are often unaware of how many students are enrolled and how many are anticipated to graduate. The question of program capacity is rarely considered, much less researched and evaluated. This exposure of the current lack of data, and the persuasion for the need to utilize data for enrollment purposes, are key to gaining support from the Campus.

Assessing Concerns. Kotter (2012) addresses the matter of complacency within the change process, and complacency is a significant concern at Campus X. Change at

Campus X has not always been positive or well executed. This, along with budget cuts and the elimination of positions, has created a sense of complacency within faculty and staff. Kotter (2012) identified several sources of complacency, including the absence of a major and visible crisis, too much happy talk from senior management and low overall performance standards. All of these issues are relevant to Campus X, however of particular relevance senior leadership has always put a positive spin on campus enrollment; for example, the message may be: Campus X is down in the overall number of students enrolled but the graduate programs are growing; or even though retention of international students may be low, senior leadership pushes the message that Campus X is increasing international enrollment. This 'happy talk' not only leads to complacency within the institution but it also negates that fact that there is a significant and potential crisis at hand with regards to enrollment.

To be prepared for change means to be prepared for resistance and concerns from those involved and impacted. There will, without a doubt, be resistance to change and significant concerns from individuals within the institution. A deep, hard look at the institutional data will reveal that some programs are not performing well, that some support programs are not effective, etc. These types of revelations in the current fiscal environment leads to fear of job loss. The messaging must be clear: the goal is not to eliminate positions and programs; the goal is to grow the institution, hopefully resulting in more students and therefore more staff and faculty are to support the students.

Chapter Summary

In this chapter, I outlined the organizational context concerning a specific Problem of Practice at a small Canadian university campus. The Problem of Practice is

the lack of a data-informed approach to strategic enrollment management. The need for a more data-informed approach to strategic enrollment management was outlined, along with the role of leadership positions. I described the context of the problem, and why change is necessary. External and internal factors were considered, along with an in-depth evaluation of the context of the problem within the literature. I suggested that the process of moving Campus X to a data-informed approach to strategic enrollment management may be a long and challenging process, especially with the goal of embedding this change within the culture of Campus X.

Given the Problem of Practice and the institutional environment and culture, and viewing this PoP though a cultural lens, I argued that an authentic leadership approach, augmented by a distributed leadership approach and appreciative inquiry, will have the greatest likelihood of creating lasting cultural change within Campus X. I reasoned that the change will need to be driven by change champions within the Campus, at both the staff and faculty level, and that the change process will be continual, ever evolving, as technology and data evolves.

Chapter 2 will discuss the process of change. How this change will be implemented at Campus X and possible solutions there may be to address the Problem of Practice. Chapter 2 will conclude with an extensive look at the ethical considerations in relation to this change process.

Chapter 2: Planning and Development

In Chapter 1 of this Organizational Improvement Plan (OIP), Campus X was introduced and the Problem of Practice (PoP) of a lack of data-informed strategic enrollment management at Campus X was considered. It was found that the literature outlines clearly that institutions are unable to undertake a strategic enrollment management (SEM) process if the process is not based in good institutional data (Bontrager, 2008; Bontrager et al., 2012; Gottheil & Smith, 2011). With this PoP in mind, and considering it from a cultural lens, I argue that an authentic leadership approach (George, 2003, 2007, 2010) supplemented by distributed leadership (Spillane, 2005) and appreciative inquiry (Cooperrider & Whitney, 2005), would lead to the greatest likelihood of creating lasting change within Campus X. In this chapter, consideration will be given to how Campus X should change through the utilization and implementation of Deszca, Ingols and Cawsey's Change Path Model (2019) as well as Schein's (1983, 2017) approach to changing culture. An analysis of the leadership approaches to be implemented within the context of Campus X will be conducted to create change regarding the PoP at Campus X. Several potential solutions to the problem of a lack of data-informed strategic enrollment management at Campus X will be presented, along with ethical leadership consideration.

Leadership Approaches to Change

Change is a process that requires appropriate, consistent leadership and a commitment to change to ensure the best possibility of a successful change. When considering a change process and the leadership approaches to lead this change one must first consider the type of change that is required, the context of the organization in which

the change is desired, and the individual(s) leading the change (Ruben et al., 2017). There are a wide variety of leadership approaches to change and often more than one approach may be utilized. The lens in which this PoP is viewed is through a cultural organizational lens, which is based on the work of Schein (1983, 2017) and his theory of organizational culture. In the case of Campus X and the Problem of Practice of a lack of a data-informed approach to strategic enrollment management, two primary leadership approaches to change will be considered.

Authentic Leadership. Authentic leadership has come to be viewed as a leadership approach based in ethics and values (Northouse, 2010), and specifically based in the ethics and values of the individual leader. There are a variety of definitions of authentic leadership. Gardner et al. (2011) outlined an array of definitions of authentic leadership all with similar undertones but varying descriptions.

For the purposes of this research the definition presented by George (2003) will be utilized. Generally speaking, George defined authentic leaders as people who are genuine and who remain true to what they believe in. Authentic leaders work hard to understand the purpose of their leadership and they lead by their values.

George (2003) states:

> Authentic leaders use their natural abilities, but they also recognize their shortcomings, and work hard to overcome them. They lead with purpose, meaning, and values. They build enduring relationships with people. Others follow them because they know where they stand. They are consistent and self-disciplined. When their principles are tested, they refuse to compromise. Authentic leaders are

> dedicated to developing themselves because they know that becoming a leader takes a lifetime of personal growth. (p. 12)

As it relates to Campus X, specifically the environment at Campus X—which was discussed in Chapter 1—authentic leadership is seen to positively affect employee attitudes and behaviours, leading to greater employee commitment, engagement and performance (Erkutlu & Chafra, 2017). Authentic leaders are less concerned with their own personal gain and are more concerned with building up the individuals within the institution to achieve the institutional goals (George, 2010; George & Sims, 2007). As a leader, I demonstrate authentic leadership through my integrity and transparency. I practice active listening and ensure that everyone not only has a voice, but a voice that is heard and considered. Other characteristics of authentic leaders are things such as leading with a vision, being self-aware and leading towards a goal/purpose (George, 2010).

The theory of authentic leadership serves as the main framework to leading change at Campus X regarding a more data-informed approach to strategic enrollment management. Authentic leadership allows for the change to be led while building more positive employee attitudes. At Campus X, the environment has long been one of distrust of leadership. To ignore that environment of distrust would not only be imprudent but detrimental to the change process. Recognizing and embracing the environment of distrust, and working to overcome it, is best executed through an authentic leadership approach as this approach works to build trust with employees by building up individuals and has its basis in authenticity and transparency (George, 2010). Authentic leadership challenges the traditional understanding that effective leaders are people who stand ahead

of others, guiding the way for others to follow. Authentic leadership conceptualizes leadership as a set of interpersonal relationships that work to empower all involved to work towards change (Davison et al., 2014). George (2010) argues that to be a true authentic leader one must understand what motivates them to be a leader and consider intrinsic and extrinsic motivations. Extrinsic motivations are those that are measured by the external world while intrinsic motivations come from your sense of meaning or purpose. Table 2 shows how extrinsic and intrinsic motivations in the workforce can be considered. To be a true authentic leader, the motivation to lead must come from intrinsic motivations. As a leader, although I enjoy public recognition for the work I do, I gain my greatest enjoyment in helping others reach success, working together for the greater good, and overcoming obstacles as a team.

Table 2

Extrinsic and Intrinsic Motivations of Leadership

Extrinsic Motivations	Intrinsic Motivations
Having a title/power	Making a difference
Social status	Helping others
Public recognition	Personal growth
Making money	Being true to one's self

Note. Adapted from George (2010).

Considering Campus X's environment of distrust, and the Problem of Practice identified, there may be significant resistance to a more data-based approach to strategic enrollment management. Historically, Campus X has not been well-informed with institutional data as it pertains to student enrollment. This lack of data-informed

knowledge has resulted in programs, courses and support services with low enrollment to often go unchecked in terms of supporting institutional goals. The lack of data has also prevented leadership from adequately and appropriately addressing such issues, as they do not have the data to support their claims or to make informed strategic decisions. A more data-informed approach to strategic enrollment management will lead to greater scrutiny of institutional decisions, which is anticipated to foster resistance from some faculty and staff. An authentic leadership approach is the best possible approach for addressing resistance because it is based in authenticity and truthfulness; consequently, people who may not like the scrutiny, or who are fearful of its repercussions, at least have the opportunity to objectively understand where the desire for change is coming from—namely, institutional goals and not personal or political agendas. George (2010) states very clearly that it is only once a leader stops focusing on their own personal ego are they able to fully develop as a leader. When this happens, they feel less intimidated by their talented peers and become more open to others' points of view, allowing for greater decision making. It is in this awareness that a leader begins to recognize the unlimited potential of empowered employees working together on a shared purpose with an authentic leader (George, 2010).

Distributed Leadership. The Problem of Practice of a lack of data-informed strategic enrollment management will also require leadership and involvement of more than just a single leader. For Campus X to fully engage in a data-informed approach to strategic enrollment management, involvement and leadership within all faculties and departments will be key. As Bontrager et al. (2012) indicate, SEM is a shared responsibility. Considering this, a distributed leadership approach must also be

considered. The authentic leadership approach would be utilized by me as the primary leader of the change, but the distributed leadership approach would ensure that I can engage other leaders within the organization to share the work and responsibility.

A distributed leadership approach understands that there are various leaders within the institution (Spillane, 2005), and that leadership roles are often shared among many within the institution (Harris, 2007). At Campus X there is a small senior leadership structure; however, there is a larger number of informal leaders within the institutions, leaders who are often well respected among their peers and hold great influence on the faculty and staff population as a whole. Ruben, De Lisi and Gigliotti (2017) define informal leadership as "a form of social-organizational influence exercised by individuals who do not occupy a position of authority within a particular context" (p. 149). Informal leaders are vastly different from formal leaders and are viewed as having vastly different characteristics (see Table 3). We see that informal leaders gain their power and credibility through peer respect and their interpersonal relationships (Ruben et al., 2017). These unofficial leaders will be vital to the success of the change to a data-informed approach to strategic enrollment management, as they are seen to have significant social influence across institutional departments and networks. A distributed leadership approach gives those informal leaders at Campus X the greatest opportunity to impact change and allows the change process to utilize their sphere of influence. Within a distributed leadership approach, focus is placed on the interactions among individuals, as opposed to the singular actions of individuals and it utilizes both the formal and informal institutional leaders (Spillane, 2005). The distributed leadership approach

recognizes the influence and work of all individuals (Spillane, 2005), so Campus X could avail of the informal networks that exist by utilizing informal leaders.

Table 3

Characteristics of Formal and Informal Leaders

Formal Leader	Informal Leader
Carries a power title	No official title
Clear responsibility and authority	Defined by behavior and perception from peers
Part of institutional hierarchy	Works within and between the institutional networks
Power is based on position and title	Power is based on credibility and respect
Accountable to higher authority	No specific accountability for their leadership
Often uses 'carrot' or 'stick' as a means to get things done	Uses influence and interpersonal skills to get things done

Note. Adapted from Ruben et al., 2017, p. 150.

At Campus X, to engage in a data-informed approach to strategic enrollment management and to embed this approach within the culture of the Campus, engagement from all stakeholders will be necessary. Senior leaders at Campus X attempt to engage faculty and staff in much of the decision-making process through Faculty Councils and Campus Council, as is common practice within higher education. Unlike the corporate model, many of the decisions made in higher education are made through councils and consultation. This decision-making model means that without engagement from all stakeholders change may not be successful. To engage faculty and staff in the process prior to any 'decision' being made, the value and importance of the change, and engagement in the process, will need to already be in progress. A distributed leadership

approach will create an environment for this to happen. Distributed leadership is characterized by groups rather than individuals working towards a common goal, as opposed to fulfilling pre-set hierarchical roles (Davison et al., 2014). Distributed leadership fosters success by promoting the interaction of individuals with varying skills, capacities, and interests to yield an outcome that is beyond what any of the individuals could have accomplished on their own (Davison et al., 2014). Distributed leadership reflects the colloquialism 'the sum is greater than the parts,' focusing on collaboration, shared purpose and shared ownership (Davison et al., 2014).

Distributed leadership also allows us to work to address the distrust of leadership that is currently in place at Campus X. Although distributed leadership recognizes the importance of a core leader the job of that leader is not to control the growth and change of the institution rather the leader is to ensure that a "culture of trust and openness is built and maintained so that everyone is supported" (Timperley, 2005 as cited in Hammershaimb, 2018, p. 2). This move from distrust to trust, and to a distributed leadership approach, will require the Campus to "re-conceptualize leadership as being built on collaboration rather than authority, on process and activity rather than positions" (Carroll, Levy & Richmond, 2008 as cited in Jones and Harvey, 2017, p. 128)

Congruent with an authentic leadership approach, the approach of appreciative inquiry will be utilized to build up staff and faculty to ensure the greatest success for change with regards to the Problem of Practice. Appreciative inquiry is, in its simplest form, the search for the best in people and in their organization, as well as nurturing individuals best to make it even better (Cooperrider & Whitney, 2005). Appreciative inquiry considers what gives 'life' to a system when it is most alive and most effective

(Cooperrider & Whitney, 2005). The current environment at Campus X has not been one where individuals feel alive and effective. It is one where staff morale is low and productivity and engagement are equally low. For the Problem of Practice to be appropriately addressed, the entire faculty and staff must be engaged. Without engagement from the faculty and staff, the likelihood of a deep cultural change taking place decreases and the likelihood of embedding the data-informed approach to strategic enrollment management into the Campus culture is unlikely. To get Campus X to a point where full engagement is likely there needs to be a focus on nurturing and valuing individuals and ideas and an authentic leadership approach, augmented with appreciative inquiry, will allow that to happen. Appreciative inquiry moves away from the idea that organizations are created to solve problems and instead considers what is already working within the institution and works to nurture and grow that (Cooperrider & Whitney, 2005). It allows people to flourish and celebrates what is done well, as opposed to focusing on what is not working (Cooperrider & Whitney, 2005). This will be accomplished at Campus X by utilizing institutional data to tell what the Campus does well and to work with that to grow not only the Campus but also the culture and morale on campus. Culture will play an important role in this change process and the work of Schein (2017) will be used as the framework to lead the change process.

Frameworks for Leading the Change Process

Addressing the current Problem of Practice of a lack of data-informed strategic enrollment management at Campus X, through an organizational cultural perspective introduced by Schein (2017), allows us to work towards a cultural change while addressing the PoP. Schein, through his work on organizational culture and creating

cultural change, provides several ways in which Campus X can use the desired change of a more data-informed approach to strategic enrollment management to help drive a deeper cultural change at Campus X. Using Schein's (2017) work on organizational cultural change, I will work to embed the cultural change process into the change in the approach to data-informed strategic enrollment management by understanding and utilizing Schein's three levels of institutional culture, as well as the six mechanisms leaders can use to influence the culture within an organization.

Schein (2017) tells us that before leaders embark on attempting to change the culture, Campus X must first understand what the problem is, which is outlined in the Problem of Practice statement. Institutional leaders must then be very precise when identifying what needs to change and why and must do so without discussing the culture at Campus X (Schein, 2017). Institutional culture is an abstract concept, so it can mean many things to many people. A clear problem and goal must be identified for a clear change process, which is outlined in the section above. According to Schein (2017), changing the behaviour first, before attempting to change the culture, is important to the change path protocol as it allows the leader to clearly articulate to members of Campus X what is expected of them, what the end goal is, and how to measure it. The abstractness of culture can be difficult for institutional members to buy into, so by successfully changing behaviour first, institutional leaders can use the change process to slowly and methodically work to change the culture through altering the beliefs and values of those involved in the change, without actually talking about changing beliefs and values.

The basis of Schein's (2017) research considers three distinct levels of an institution's culture, which include:

1. Artifacts and behaviours which include any identifiable element within the institutions. These artifacts and behaviours are visible; things such as dress code, signage, building layouts, even email signatures are all examples of institutional artifacts and behaviours
2. Espoused values which consider the values and rules of behaviours. This is how people are represented within the organization. This would include institutional mission and goals, but also underlying representation in this, such as departments' policies and procedures regarding how work is done and what work is most valued
3. Assumptions are considered the basic assumptions that are embedded within the culture, are often unspoken and unconscious to those within the culture yet guide the behaviours of those within the culture. Things such as sharing of workload during busy times, coffee breaks, informal processes that are rooted deep within the institution

It is important to understand what these three levels of culture are as a leader attempts to change the culture of Campus X. The goal is to reach the point where the change falls within the assumptions level, where it is embedded in the culture and is considered the deepest level of institutional culture (see Figure 2). For a cultural change based on a data-informed approach to enrollment management, a focus on the espoused values and assumptions is needed. Campus X will need to, over time, work to ensure that policies and procedures are in place to ensure institutional data is accessible while still maintaining student privacy. Leadership at Campus X can also work to embed within the culture of Campus X the espoused value of data by creating procedures where data is

required, such as with new proposals for student support programs, or new recruitment initiatives. In time, leadership could go further and place the same type of expectations on academic programs, by requiring institutional data to support course offerings, program offerings, etc. Leadership can also work within the institutional assumptions that exist at Campus X; more specifically, work to alter the assumptions to create new ones that promote a more data-informed approach. This will begin small, with a few informal campus leaders working within their networks to create new assumptions by working to change the discourse and behaviours on campus in terms of a data-informed approach to strategic enrollment management.

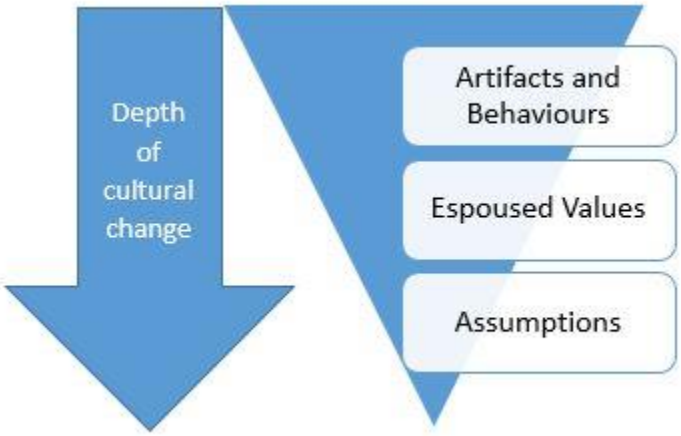

Figure 2. Schein's Model of Organizational Culture. Adapted from Schein, 2010, p. 24.

Leaders would work to change the culture by utilizing specific key mechanisms outlined by Schein (2017) to change the culture of the organization and embed this change deep within the institutional culture. Schein (2017) outlines six primary mechanisms that leaders can use to embed their beliefs, values and assumptions within the culture of the institution:

- Leaders need to be cognisant of what they pay attention to, what they measure and what they control on a regular basis. This will reveal to those within the organization what really matters. What a leader pays attention to is a clear indication of what is important to them
- Leaders need to be careful with how they react and respond to critical incidents and institutional crises. How institutional leaders respond to institutional crises "reveals the important assumptions and often creates new norms, values and working procedures" (Schein, 2017, p. 190)
- Leaders need to give significant consideration to how they allocate resources. How and where leaders invest institutional funds, or don't invest institutional funds, sends a very clear message on not only institutional priorities but the leader's own assumptions and beliefs
- Leaders must deliberate role modeling, teaching, and coaching. For instance, saying peoples' skills and knowledge are valued and working to foster their growth and development are not the same. It is the action of fostering those within the institution that gives leaders the opportunity to informally communicate and instill their values, beliefs and assumptions to others within the institution
- Leaders must be cognisant of how they allocate rewards and status within the institution. It is clear to those within the institution that organizational values are revealed by who gets promoted and rewarded. Schein (2017) reported that both the nature of the rewarded or punished work and/or behaviour, and the nature of

the reward/punishment themselves, all convey a message to institutional members about what is valued

- Leaders require an awareness of the impact on who and how they select, promote, and remove members of the institution. Considered one of the most potent ways in which a leader's values get embedded and propagated within the institution is the process of selecting or removing a member. This process sends a very clear message to other members of what the leader values

Schein (2017) indicates that organizational culture and organizational cultural change are complex and often take a significant amount of time to assess and change. Schein (2017) provides numerous models and suggestions on how organizations can work to create cultural change but they cannot do so unless they are in tune with the artifacts, espoused values and assumptions that exist at Campus X. Leadership is not to fight against these features of Campus X, but to work with them, or to work to evolve them over time. To ignore the artifacts, values and assumptions would result in a futile effort to change institutional culture. Although Schein (2017) outlines cultural change, leadership must also understand where Campus X currently sits with regards to its change readiness and need to change. This will be considered through a critical organizational analysis of Campus X as it relates to this Problem of Practice.

Critical Organizational Analysis

As outlined in Chapter 1, if higher education institutions are not engaging in a data-informed strategic enrollment management process, then there is nothing strategic about their enrollment management efforts (Bontrager, 2008; Bontrager et al., 2012; Gottheil & Smith, 2011). It is clear that Campus X has not been engaged in a data-

informed approach to SEM, so the question becomes: what needs to change? At first, the answer may seem simple: Campus X needs to engage in a data-informed approach—but the change needs to be deeper than that. If Campus X wants a long-lasting change, leadership must work to change the culture at Campus X as it relates to data-informed strategic enrollment management. Often, when problems arise, institutions are quick to find a fix. Pushing a data-informed approach to strategic enrollment management without an in-depth analysis of Campus X and the gaps that exist would be imprudent. Campus X must first understand the gaps that have prevented the Campus from progressing in this area.

Given the culture at Campus X, how its organizational change is presented will be vital to its success. Authentic leadership (George, 2003) and appreciative inquiry (Cooperrider, 1987) will allow for a transparent and engaging change process, while a distributed approach (Spillane, 2005) will allow for shared responsibility of the change. To ensure a full understanding of the gaps that exist at Campus X with regards to embedding within its culture, a more data-informed approach to strategic enrollment management, Deszca, Ingols and Cawsey's (2019) Change Path Model will be considered.

Deszca, Ingols and Cawsey's Change Path Model. Deszca, Ingols and Cawsey's Change Path Model is based in four stages (see Table 4) that focus on the change process, and it is used to guide the change (Deszca et al., 2019): it focuses on the 'how' and 'what' of the change process (Mahato, 2015).

Table 4

Four Stages of Deszca, Ingols and Cawsey's Change Path Model

Awakening	Mobilization	Acceleration	Institutionalization
Critical Organizational Analysis Why Change? Identify Gaps Change Agents	Understand Internal & External Forces Communicate Change Plan Turn Ideas into Action	Engage Others Build Momentum Celebrate Wins	Track & Measure Progress Deploy New Supports & Structures to Support Change New Stability

Note. Adapted from Deszca, Ingols, and Cawsey 2019, p. 54.

The Change Path Model will prepare Campus X to move through the change process in a timely manner, but it gives consideration to process and consideration to the people involved in the process. It allows for transparency and engagement, key features of authentic (George, 2003) and distributed (Spillane, 2005) leadership. Seeing as though the people involved in the change process represent a diversity of experiences and considering the end goal is a change in institutional culture, as Campus X moves though the Change Path Model, leadership must also acknowledge the process of changing culture, as outlined by Schein (1983, 2017), to ensure a cultural change is likely. This will be discussed later in this chapter. Recognizing that an authentic leadership approach is based in morals and values (George, 2003), there is a possibility that the change process may evoke a conflict in values. If this is the case, the Gentiles model of change should also be considered, as this model focuses specifically on the ethical- and values-implication of change (Deszca et al., 2019).

Awakening. The awakening stage of the Change Path Model begins with a critical organizational analysis (Deszca et al., 2019). For Campus X, this would mean an

analysis of both the internal and external environments to try to establish an understanding of what forces are driving the need for change at the institution (Deszca et al., 2019). There needs to be an in-depth understanding of why the institution needs to change. Considering this Problem of Practice there is significant literature as discussed in Chapter 1 that outlines the need for a data-informed approach to strategic enrollment management. For Campus X, the challenge will be moving faculty and staff away from the status quo and creating a sense of urgency not only for individual subgroups but for the Campus as a whole. The consideration of internal and external threats for Campus X will be important but also easily accomplished as the basic enrollment statistics, as well as government data on local high school enrollments, paints a grim picture.

Once the internal and external challenges and threats have been identified, internal change agents must be identified (Deszca et al., 2019). These change agents will be vital to moving the institution forward in the change process. Ensuring a clear vision of the future state of the institution brings a clearer focus and ensures that attempts to distract from the institutional goal can be averted. To ensure that the vision for change is directly connected to the desired future state of the institution, the goal of a data driven approach to strategic enrollment management must be shown to align with the current institutional strategic plan, which outlines increased enrollment as one of the goals of the institution (Campus X, 2019). Engaging these institutional change agents also allows Campus X to fully engage in the distributed leadership process, where the change process is shared among many (Spillane, 2005).

The entire awakening process must be completed with the institutional culture in mind. At Campus X, the environment of distrust of leadership must always be

considered. The goals outlined in the change process must align with the institutional goals and cannot be identified as a potential threat, but if faculty and staff do not trust those leading the change then change is not likely to be successful. The authentic leadership (George, 2010) approach and appreciative inquiry (Cooperrider 1987) is likely to work to overcome the distrust that exists at Campus X.

Mobilization. Mobilization, the second step in the change path process, focuses on determining what specifically needs to change to ensure the goal is met (Deszca et al., 2019). Mobilization requires campus-wide, in-depth analysis and discussion to identify what needs to change through the engagement of faculty and staff. Included in this process is the further development of a vision for change, which can only be accomplished by providing an understanding of the current state of the institution as it relates to the problem at hand and the envisioned future state (Deszca et al., 2019). Identifying the disparity between the current state and the envisioned future state makes the required gap analysis possible (Deszca et al., 2019). Specifically, a gap analysis identifies the gaps that exist in a current state that are impeding efforts to get to an envisioned future state (Deszca et al., 2019). A gap analysis, when done properly, will arm leaders with the knowledge to identify why change is needed and what specifically needs to change (Deszca et al., 2019).

Within the mobilization phase, and specifically within the gap analysis process, an institutional in-depth analysis of the following must take place:

- The institutional structure, system and process
- The power and cultural undercurrents of the institution
- The stakeholders

- The individuals impacted by the change
- The change agents (Deszca et al., 2019, p. 54)

This analysis produces a greater understanding of the institution's strengths, weaknesses and challenges by revealing the areas that require the most attention during the change process (Deszca et al., 2019).

Once the gap analysis has taken place, and a clear vision is established, a strong communication plan must be designed to ensure the vision circulates and can have uptake within the entire campus. The communication process will be vital in the change process; it will ensure that everyone is clear on the end goal and that all parties are working towards the same goal, as is the case with distributed leadership (Spillane, 2005). Considering Campus X, and the environment of distrust, the communication process will have to take place on many levels, with true transparency, in an effort to build trust. This may include individual meetings with the schools, faculty and departments, as well as larger discussions at Faculty Council and Campus Council and must involve a two-way communication plan (Deszca et al., 2019). Two-way communication opens the learning experience for all involved and allows for the greatest benefit, as all individuals have a role in helping the institution change (Deszca et al., 2019). It will be imperative that the messaging in all of the communication has the same focus, with the goal being to establish trust. Deszca et al. (2019) stated "When coupled with transparency, authenticity and minimal levels of executive defensiveness, these communication approaches advance recipient engagement and adaption to change" (p. 254). If the communication on the change process is not properly managed, successful transition into the third phase of the Change Path Model is unlikely.

Acceleration. The acceleration phase of the Change Path Model is the action phase. It is where ideas become actions. Acceleration involves planning and implementation as it relates to the change (Deszca et al., 2019). The knowledge and information gathered in the previous phases are used to develop a detailed action plan to bring about change. If the vision of change is communicated clearly in the mobilization phase, then the acceleration phase empowers individuals at all levels of the institution to utilize their skills and knowledge to implement the change process (Deszca et al., 2019). This utilization of skills and knowledge and focus on the positive change is a key aspect of appreciative inquiry (Cooperrider, 1987; Cooperrider & Whitney, 2005). For Campus X, this will entail utilizing faculty and staff in different manners to engage in the data driven enrollment process. The key to change for Campus X is to change the culture around data driven strategic enrollment management. This process may be slow, so small wins need to be celebrated. Success in the change process, even small successes, needs to be visible and seen as progress towards the end goal (Deszca et al., 2019).

Institutionalization. The final stage of the Change Path Model evaluates the change and considers the success of the change. It is at this stage that a determination is made on whether or not the desired change has taken place (Deszca et al., 2019). Although progress and goals along the way are celebrated and measured, it is in the institutionalization stage that the Campus can see how deep the change runs. To understand the depth of change, there must be specific measurement tools to quantify the change (Deszca et al., 2019). In the case of changing the culture at Campus X to embrace a data-informed approach to strategic enrollment management, the most significant measure will be in the discourse on campus. Once the discourse on campus is rooted in

data-informed analysis of enrollment, and strategic enrollment management is guided by institutional data, then change will have taken place. As Barrett, Thomas and Hocevar (1995) indicate discourse is a significant measure of change. The discourse on campus will measure the level of change in the culture pertaining to a data-informed approach to strategic enrollment management, but that institutional data will also be a significant measure. Institutional data will allow Campus X to better understand its students, and its successes or challenges when it comes to strategic enrollment management.

The Change Path Model provides a framework to guide the desired change at Campus X. The process of changing a culture is a long and often difficult process; however, when guided by the Change Path Model, changing a culture has a better promise for success. The following section will consider the utilization and analysis of institutional data for the purposes of an institutional gap analysis and considers a variety of possible solutions to address the Problem of Practice.

Possible Solutions to Address the Problem of Practice

Due to the depth of this Problem of Practice with regards to a lack of data-informed strategic enrollment management at Campus X, the solutions presented here are the first steps in what should be a well-paced process that invites additional solutions and considerations in the future. These solutions take into consideration the current fiscal and human resources capacity at Campus X. Keeping in mind the desire for cultural change, and the approaches of authentic (George, 2010) and distributed leadership (Spillane, 2005), four possible solutions will be considered as the first steps to address the lack of data-informed strategic enrollment management at Campus X:

1. Yearly in-depth analysis of institutional data with regards to student recruitment, retention and enrollment
2. Reformation of the SEM Committee
3. Develop and implement a Stop Out Survey
4. Develop a base service standard for all front-line student supports and ensure yearly evaluation

All of these solutions will require buy-in from faculty and staff to move the change in culture forward, but to change the culture to a data-informed culture Campus X must first access and understand the data.

Solution One – Yearly Institutional Data Analysis. The institutional data that Campus X utilizes and evaluates often entails accounting for the number of students in each program, the number of students in each year of studies and the number of International vs. Canadian vs. Provincial students. There has been very limited in-depth analysis of the institutional data and certainly no scheduled communication and discussion of it. It is proposed that Campus X engage in an in-depth data analysis process on a yearly basis. This analysis would involve data from several different sources. As Gottheil and Smith (2011) outlined, to engage in a SEM process, data from a wide variety of sources should be utilized, including: student information systems, academic programs, student surveys, national data and projected enrollment. Some of this data is readily available to Campus X such as program data and national data, but some aspects of this data analysis will have to be developed or refined, such as student surveys and student information systems respectively.

Mining institutional data can be a never-ending vortex (Gottheil & Smith, 2011). For Campus X, the data exploration and analysis will need to be focused in areas directly related to enrollment management, specifically recruitment (i.e., market evaluations, projected enrollments, etc.), student retention/supports (i.e., academic support programs, student feedback, front line student services), and academic programs (i.e., program enrollment, student feedback, employment rates post-graduation).

This data evaluation must take place every year and be made available and communicated with the Campus community at the same time every year, to ensure the sense of urgency and success can be shared by all. Gottheil and Smith (2011) outline that for faculty and staff to fully engage in strategic enrollment managed they need to be aware of what the institution data indicates. It would be proposed that data from the previous academic year be evaluated and presented in the fall semester.

Among several significant considerations when implementing this solution is who will do this work? Due to the fiscal issues Campus X faces, it is recommended that current staff be utilized, specifically staff in the areas of the Registrar's Office, Student Services and Student Recruitment and the Center for Institutional Data. Support for this and the reallocation of responsibilities would need to be supported by the Campus Registrar, who oversees all three departments. There will also be technological considerations, because if the Campus is to fully engage in in-depth data analysis, it must first have access to the data. Access requires the appropriate technology to gather, evaluate, circulate and store data from student surveys.

Financially, this solution would require limited budgetary consideration, a small budget of $2,000 per year would cover any cost for materials. The largest considering for

this solution would be the time of staff members and the re-allocation of work to allow this project to be a priority.

The clear benefit of this solution is a greater understanding of the historical, current and predicated future state of Campus X with regards to enrollment. This solution would allow the Campus to make informed decisions on enrollment management based on institutional data as opposed to the current practice of basing decisions on hunches or feelings. To be strategic in enrollment management institutions need to have good data to inform their decisions (Bontrager et al., 2012; Gottheil & Smith 2011).

The largest challenge to this solution will be the need for someone to take ownership of these responsibilities and in the current environment of consolidation of positions there is no clear place in which this ownership can be housed. Therefore the creation of a Manager of Strategic Enrollment Management would be best. However, the effect of creating such a position is likely to result in another damper to staff morale, as staff have had significant cuts to their departments in the last number of years.

This solution is estimated to take one year to implement and then for each subsequent year, approximately a four month period of additional work will be required to maintain the information flow of institutional data.

Solution Two – Reformation of the Strategic Enrollment Management Committee. In its current state, Campus X has very little to no leadership when it comes to strategic enrollment management. Reformation of the SEM Committee to include the Campus Registrar, Director of Marketing, Deans (or school representative), Recruitment Representative, Student Services Representative, Student Representative, and Student Housing Representative would equip the Campus with a group of Campus leaders

focused on the institution's enrollment goals. The Committee may want to include special interest groups, such as indigenous students, LGBTQ and international student representation, if any of these groups are identified by the Committee as being vital to the institution's strategic enrollment plan.

The key function of the SEM Committee would be to develop and communicate an institutional data-informed strategic enrollment plan. As Hundrieser (2016) outlined, an institutional SEM plan must engage with the institution's mission, values, and vision, as well as align the academic and non-academic supports and programming to engage students. It is this interconnectedness that will ensure each institutional unit is unified to ensure that the academic and non-academic needs of the students are being met through a single plan—the SEM plan.

Implementation will require minimal financial resources, but there should be a small amount of financial resources available to the Committee for its own professional development in the area of data-informed strategic enrollment planning. The most significant resource needed to advance this solution is human resources. Currently at Campus X, several administrative areas vital to SEM have seen their portfolios expand in the wake of the elimination of positions. The cutting of positions for fiscal 'efficiencies' has resulted in the redistribution of workloads from those cut positions onto remaining employees. For staff who were already feeling a low morale from being overworked, the fiscal efficiencies brought on by the cut to administrative positions were not cause for celebration. If SEM is to be a key goal for Campus X, the workloads of employees vital to the process need to be adjusted to ensure they have adequate time to commit to the work that needs to be done. Technological resources play a small role in regards to the

formation of the SEM Committee, but for the Committee to move forward with its objective, there will need to be a number of reports written within the student data management system ensuring that there is a clear understanding of what the data represents and how it is to be used.

Although there are several benefits to this solution, the primary one is a committee focused on data-informed SEM at Campus X. The reformation of the SEM Committee will move the Campus from the mindset of 'enrollment is everyone's responsibility'—yet no one does it, to a mindset where there is defined leadership in the area. Bontrager et al. (2012) states "it takes an entire academic community to ensure enrollment health for an institution" (p. 17). Although the goal is to embed the data-informed approach to strategic enrollment management within the culture of the Campus, the process will still require some leadership and ownership (Bontrager et al. 2012).

There are a few apprehensions that need to be acknowledged regarding this solution. The previous SEM Committee slowly faded out, with work having been done in the area of SEM but with no tangible results in relation to enrollment. Consequently, lack of results in the past may cause faculty, or even institutional leaders, to be resistant to the re-formation of the SEM Committee. Also, concern over faculty and staff already being overworked, and the Campus having too many committees, is already present in the discourse at Campus X. Hence, the re-formation of this committee may be met with resistance because the Campus is already committee heavy, with many committees not being action oriented. A sense of urgency for change will need to be communicated and understood to work against this resistance.

This solution requires significant human resource allocations: it would require bi-weekly meetings with the senior leadership of campus, a group that is already over scheduled. It would also require one person to take the 'lead' on this committee; however the work cannot be done by one person, and so the time commitment from the members of senior leadership would be significant, estimated at 3-5 hours per week. This solution could be implemented promptly; however, there would be no 'end' date, so significant adjustments to departments in relation to workloads would have to take place first.

Solution Three – Develop and Implement a Stop Out Survey. There is significant conjecture at Campus X as to why students leave without completing their programs. It is known within the Campus that a significant number of students start their program at Campus X and, after completion of their first year, then move on to the main campus to finish their program. Although the data on students moving to the main campus is not analyzed, it is collected, and solution one presented in this paper would allow for a greater understanding of these students. What is not clearly understood, and what is lacking in institutional data, is why some students who leave Campus X are not retained within the institution at all (i.e., other campuses). Student surveys give key insight into the SEM planning process and provide a wealth of information that institutions would otherwise lack (Gottheil & Smith, 2011). They give institutions greater understanding of why students are taking the action they take. For Campus X, understanding the reasons why students withdraw will identify areas the Campus can work to improve and work toward a greater retention rate. Student directed special-

purpose surveys give institutions a greater understanding of areas that are important to their enrollment planning (Gottheil & Smith, 2011).

For Campus X, a Stop Out Survey should be developed and implemented every year. This survey would work to understand why students who were eligible to return do not. Those students who were retained within the institution would not be part of this survey. The survey should look specifically at students who were eligible to return to studies within the institution and did not. A mixed methods format should be used to gain insight on why students did not return, it allows researchers a greater opportunity to investigate issues in education (Almalki, 2016). Because of the small size of the institution, the amount of demographic information collected from participants should be limited, to ensure student confidentiality is upheld. This survey would require approval from the Institutional Survey Oversight Committee, as well as the Vice-President.

As with other solutions presented in this paper, a Stop Out Survey will require defined responsibility and ownership. Ideally that responsibility would fall within the Registrar's Office in the current situation, with a reallocation of responsibilities within the Registrar's Office to take place. This reallocation of responsibilities would need to be decided upon by the Campus Registrar.

There would also be a financial investment in this solution, specifically an incentive to attract students to take part in the survey would be needed; however, a financial investment of a few hundred dollars would be sufficient. The institution would also need to ensure that they have the adequate technology to support the circulation of such a survey and the technology to evaluate the results. From a human resources standpoint, this solution should take one semester each academic year, with a staff

member of the Registrar's Office overseeing the survey development, circulation and data analysis.

The results of this survey should be shared with the Campus to work to create the sense of urgency that is needed to drive change in the area of enrollment management at Campus X.

Solution Four – Develop Service Standard and Evaluation Process. Campus X has seen significant cuts to front line staff in recent years. This has resulted in longer wait times for support, more automated supports and often a decreased level of service. The level of support that students get on campus can vary from department to department and from faculty to faculty. The goal of this solution is three-fold:

- to have a service standard for each student support service which is communicated to students to ensure clear expectations. Clear expectations will reduce ambiguity and unmet expectations, garnering greater student satisfaction
- to develop staff who work in front line student supports to know what the expectations are on them and to give them an avenue to appeal for more support when demands put pressure on the service standard
- to show staff that a data-informed approach to enrollment management is not about cutting services or programs, but it is about bettering the institution. This solution will work to change the culture on campus but enable staff to utilize data to supplement their work and allow them to fight for resources based on data

Bontrager et al. (2012) states "in the SEM ethos, service is more important than structure" (p. 18) and outlines that if supports, policies and practices do not make sense to students, and do not meet the students expectations, than it is difficult to meet

enrollment goals. Once service standards are developed, there must be a way to evaluate those service standards. This is another way the institution can utilize data to work to improve the student and staff experience.

There are a number of significant concerns with this solution, as it will take significant work and research from staff to develop the service standard. This would involve engaging with students to understand what the student expectations are, see what the standards are at other institutions in Canada and then work within the current staffing to see if an agreeable standard can be met. It is expected that there may be financial resources needed to align the Campus with reasonable service standards, as significant cuts have been made to front line student supports. The depth of these financial resources will not be known until the base service standard is identified; however, it is anticipated to be significant and upwards of hundreds of thousands of dollars. The human resources and technology resources required for this solution would be significant as well; for full implementation, it may take years and hundreds of staff hours. It is recommended that for this solution, start small, with one department or service, and then slowly roll out the service standards over a three to five year period.

Another consideration is the possibility of utilizing technology to increase the service standard. Although Campus X prides itself on a personalized experience, there may be ways in which the Campus can provide a more accessible and timely service for common, basic student requests, such as confirmation of enrollments, instant messaging/help lines during registration, etc. Higher education students now live in a digital world, where there is often an expectation of digital service, and as Bontrager et

al. (2012) outline, if institutions are not meeting students expectation, they risk losing them

Each of the solutions discussed above provide a starting point of addressing the Problem of Practice of a lack of a data-informed approach to strategic enrollment management. Each individual solution will initiate Campus X on a path to cultural change. Combined these solutions provide Campus X with a clear roadmap of how to move towards sustainability though a deep cultural change in the approach to SEM and Campus X should work to implement all of these solutions over an extended period of time, for the greatest likelihood of successful change. One key area of consideration before moving into the implementation stage is that of the ethical considerations of this change process. Working with and utilizing student data for institutional gain is not without its ethical considerations.

Leadership Ethics and Organizational Change

There are numerous ethical considerations when leading this change at Campus X. Organizational leadership ethics, ethics of change and the ethics of data utilization must be considered. Leading change in higher education can often present ethical dilemmas with competing priorities. As an effective authentic leader, I need to be able to ethically navigate all these challenges.

Organizational Leadership Ethics. The leadership approach taken in this Organizational Improvement Plan is an authentic (George, 2003) and distributed (Spillane, 2005) approach, with aspects of appreciative inquiry (Cooperrider, 1987) also being applied. "Ethics are central to leadership" (Northouse, 2012, p. 337); to lead is to influence others to work towards a common goal, and often involves influencing people

to change. As a leader, I understand this influence is not to be taken lightly, and carries a significant ethical responsibility (Northouse, 2012).

Authentic leadership has its basis in the values, beliefs, and ethics of the leader (George, 2010), so ethical considerations to an individual's position are inherent to an authentic leadership approach. Although my values, ethics and beliefs as a leader are important, it is also vital that I understand that those being led will have their own set of values, beliefs and ethics. One must work with this variety as opposed to against it. My goal as an authentic leader will not be to convince people to believe what I believe, my goal will be to work with them, to see how the varying values, beliefs, and ethics can work together towards a common goal.

Ethics of Change. The change process requires ethical consideration, in particular when a cultural change is the end goal. As Schein (2017) advised, if deep cultural change is to take place, the institutional and individual values play a vital role. Understanding and respecting the individuals within the institution and bringing them together to work towards a common goal will take time and be based in respect. Understanding the history at Campus X of significant fiscal cuts and significant distrust of leadership, I will have to work to gain the trust of the faculty and staff if deep cultural change is to happen. Creating deep institutional change requires an understanding of those who are affected by change and that the change agents fully understand what is at stake and be able to communicate their resistance to the change (Acre & Gentile, 2015). It is in this communication of resistance that I can apply an authentic leadership approach (George, 2010) to ensure that the varying opinions on the change are not only heard but valued and respected. Appreciative inquiry (Cooperrider, 1987), allows me to ensure that

faculty, staff, students and general stakeholders have a voice and their voice is heard. This is not only vital to the change process, but also vital to building morale. My personal values and concerns as a leader are important, but the values and concerns of the change agents (i.e., faculty and staff) are important as well.

Ethics of Data Utilization. Dr. Joan Hope (2017) indicated that if higher educational institutions' goals are to improve student retention and completion, then using data to understand students must be the first step. Campus X must be able to use student data for decision making processes, but it must also be ensured there are clear guidelines and policies on how student data is collected, managed, stored, analyzed, and used in an effective and efficient way within a complex set of legal and institutional policies (Young & McConkey, 2012).

Before Campus X can successfully use student data, policies on the usage, storage, management and analysis of the data must be further considered. Campus X already has a robust set of privacy policies, including policies on privacy, information management and electronic data security, as well as a dedicated privacy office. Although higher educational institutions have a plethora of policies with regards to privacy, student data, data management, research and data gathering, etc., there is often no single policy which covers the specific concerns of learning analytics, specifically the usage of student data to drive institutional enrollment, programs and policies.

> "Most higher education institutions have existing policy frameworks in response to (inter)national legislative contexts to regulate and govern intellectual property, safeguard data privacy and regulate access to data. These policy frameworks may

> not always be sufficient to address the specific ethical challenges in the harvest and analysis of big data in learning analytics" (Prinsloo & Slade, 2013, p. 244).

Privacy policy in relation to data, and specifically student data, is rapidly changing. Pardo and Siemens (2014), in their research on privacy principles for learning analytics, demonstrated how rapidly technology is changing and evolving and with it is the rapidly changing and evolving usage of student data; however, the policies pertaining to the usage and dissemination of student data is often slow to change and evolve, often making it obsolete before it even becomes official policy. The collection, management and analysis of student data have and continue to be a growing trend in higher education (Kruse & Pongsajapan, 2012; Pardo & Siemens, 2014; Prinsloo & Slade, 2014). Campus X needs to be using student data as a driving force in recruitment, retention, enrollment management, and student success efforts; however, it must be able to clearly define student privacy as it relates to student data. The data that is being utilized is not just data, it is students' personal information—and the institution has an obligation to protect it and use it only in the ways in which students have given permission for it to be used.

There are numerous ethical considerations as Campus X moved though this change process. Working to change institutional culture implies that leadership is working to change how people view or consider their personal experience, beliefs and values. Leaders must consider their place in that process and ensure that respect and integrity are always at the forefront of the processes. Campus X has an ethical and moral obligation to ensure that any student data it uses for the advancement of the institution is adequately and rigorously scrutinized in relation of student privacy policy and must

ensure that the student privacy is upheld. Processes must always viewed through an ethical and moral lens.

Chapter Summary

Chapter 2 provided an analysis of how I, as a leader, will drive change at Campus X. Outlining my leadership approaches as authentic (George, 2010) and distributed (Spillane, 2005) leadership and supplemented with appreciative inquiry (Cooperrider, 1987), I will work to drive a change process that will address the Problem of Practice of a lack of a data-informed approach to strategic enrollment management. Deszca et al.'s (2019) Change Path Model was considered, as well as the processes of awakening, mobilization, acceleration and institutionalization. Four possible solutions to the PoP were presented, with specific consideration being given to the impact, resources, benefits and challenges of each solution. As this PoP deals specifically with student data and institutional cultural change, a significant discussion on the ethical and moral considerations was provided. In Chapter 3, the implementation, evaluation and communication of the change process will be discussed.

Chapter 3 – Implementation, Evaluation and Communication

As discussed in Chapter 2, one of the goals of this Organizational Improvement Plan (OIP) is that it will lead to the beginning of a cultural shift at Campus X. Schein's (2010, 2017) work on cultural change and Deszca et al.'s (2019) Change Path Model were examined. The utilization of these theories and change processes to create change at Campus X was also discussed. In this chapter, the discussion moves beyond that of the change theory and into the implementation process. The goal of this OIP is to address the Problem of Practice (PoP) and also to begin a cultural shift at Campus X with regards to how the Campus views the data-informed approach to strategic enrollment management. The cultural shift will take time and the change outlined in this OIP is the beginning of that process. However additional changes will need to take place if deep cultural change is to be accomplished.

Change Implementation Plan

Multiple solutions to the PoP were presented in Chapter 2. The solution of a yearly in-depth analysis of institutional data for strategic enrollment management purposes was chosen. This solution was chosen due to the strong support in literature that clearly outlines the necessity for good institutional data, if an institution is to engage in a strategic enrollment management process (Bontrager, 2008; Bontrager et al., 2012; Gottheil & Smith, 2011) Currently, Campus X considers very little institutional data. Discussion and discourse on campus show that faculty and staff often do not even know what the current campus enrollment is. For years, key institutional data such as retention rates, graduation rates and dropout rates have not been considered or communicated to the Campus. This lack of data leads to misinformation and decisions being made based

on hearsay or hunches, which can be detrimental to the institution (Bontrager et al., 2012).

Objective, Goals and Strategies. The main objective of this Organization Improvement Plan is that within one-year Campus X will have greater access to and understanding of institutional data as it pertains to strategic enrollment management (SEM). In doing so, Campus X will increase utilization of institutional data in the decision-making processes as it relates to SEM, ensuring that the institution is efficient, effective and economical in its enrollment management (Bontrager et al., 2012; Gottheil & Smith, 2011). To achieve this objective, two key goals are outlined below:

- Goal 1 - Within one year, I will lead a working group at Campus X to establish base institutional data measures for a yearly in-depth institutional data analysis as it pertains to strategic enrollment management, as well as establish yearly communication and dissemination processes for the institutional data
- Goal 2 – Within one year, Campus X will begin to see a cultural shift, a shift to a culture where institutional data is valued, considered and utilized in the decision-making process on campus

While there are numerous approaches to change in higher education, for this OIP Schein's (2012) model for cultural change and Deszca et al.'s (2019) Change Path Model will be utilized. These approaches were chosen based on their direct connection with changing the institutional culture.

The change implementation plan, summarized in Appendix A, outlines the aforementioned goals in an 8-step change process, indicating goals, implementation process, limitations, resources and timelines. The plan connects each step of the change

process to Schein's (2017) model for cultural change and Deszca et al.'s (2019) Change Path Model. This 8-step change process also employs the SMART Plan: specific, measurable, attainable, results and time bound, presented in Appendix B (Doran, 1981). Employing the SMART Plan in conjunction with Schein's model for cultural change and Deszca et al.'s (2019) Change Path Model ensures the greatest likelihood of success in the change plan process. The 8-step process, and how it connects to Schein's model for cultural change, as well as Deszca et al.'s (2019) Change Path Model will be discussed further below.

Step 1: Creation of a Data Analysis Working Group. This process involves the awakening stage of Deszca et al.'s (2019) Change Path Model focusing on an organizational analysis and considering why Campus X needs to change. This stage works to identify change agents to help drive the change process. This process also involves the unfreeze step in Lewin's Change Path Model (as cited in Schein, 2017, p. 299), which was endorsed and further expanded on by Schein (2017) as a model for cultural change.

During this step I will work on the formation of a working group at Campus X which will be responsible for the Campus's institutional data analysis. The formation of the working group should be accomplished by:

- Gaining support from the Vice President
- Gaining support from the Campus Registrar who is responsible for Registrar's Office, Student Services and Student Recruitment
- Gaining support from the Deans, as individual school data is to be gathered and presented to the schools

- Identifying representatives from the Registrar's Office and Student Recruitment to sit on the working group

This step will require support from the Campus Vice President, Registrar and Deans. Once support is gained from these key campus members, the process of moving forward will be quite manageable. Bontrager et al (2012) show that the step of having senior leadership demonstrate their support is vital to the SEM process. The only resource needed here is that of human resource time, specifically my time and the time of the key stakeholders noted above. Although Campus X will be utilizing current staff members, there will be a time commitment required from these staff members and their supervisors will need to support this as a priority. A meeting with the key players to outline the problem, solution and process is necessary to gain their support. Ruben et al. (2017) discuss that institutions must first gain an awareness of the need for change, stating "clearly, if no one sees no need for change, and is unaware of proposals to address these needs, nothing happens" (p. 253). This process of seeking support of senior leadership should help to create a sense of urgency (Kotter, 2012; Ruben et al., 2017).

Although this step can be completed without the support of the Center for Institutional Data (CID), the remainder of this plan cannot be implemented without them. Therefore, it is important to include them in these primary meetings to ensure that they understand the importance, scope and process of this plan, and to ensure that they are able to support the process. The working group should be comprised of myself as Chair, the Campus Registrar, a representative from Student Recruitment, and a representative from the Center for Institutional Data. This group would make up what Kotter (2012) calls the guiding coalition, members of campus who have power, expertise, credibility

and leadership in the area of SEM. This step is anticipated to take approximately two weeks.

Although this step is viewed as easily attainable, it is not without its limitations. Campus X is already viewed as having too many committees. There is resistance from some faculty to form new committees and therefore resistance from faculty for the formation of this committee is anticipated. Based on this anticipated resistance, the choice to call this group a working group and not a committee is a conscious one to offset this resistance. In direct contrast to the above noted anticipated resistance, it is also the case at Campus X that programs and/or departments want to ensure full representation on all committees. It is anticipated that there may be some resistance to the fact that there are no faculty members on the working group. It is important to recognize and acknowledge resistance to change (Deszca et al., 2019; Ruben et al., 2017). This will be mitigated by clear communications on the role of the working group as a data analysis group. Ruben et al. (2017) discuss the value of clear communications in overcoming resistance to change, while Lewis (2011) outlines that communication is vitally important in implementing change in organizations. The goal is not to make decisions based on the data, just to gather and analyze said data. How the data is used for decision making purposes is beyond the scope of the working group. This message will need to be communicated numerous ways to ensure the message is received (Kotter, 2012, Ruben et al., 2017). Implementation of this step is fully contingent on the buy-in from the Campus Vice-President, Campus Registrar and the Deans. For this step the only implementation issue anticipated is possible resistance by senior leadership, as senior leadership support is needed for an effective SEM process (Bontrager et al., 2012). The conversations on

campus for many years have been focused on enrollment issues and how to address them so it is anticipated that a well-developed plan to address the enrollment issue that has limited financial costs will be welcomed by senior leadership.

Step 2: Create Roles, Responsibilities, Timelines and Data Measures. This process is a continuation of the awakening stage of Deszca et al.'s (2019) Change Path Model and a movement into the mobilization stage as the working group considers its role and responsibilities but also considers the internal and external forces at play in regard to student enrollment. This will impact the type of data analysis that will take place. This step is also firmly rooted in the unfreeze process of Schein's (2017) model for cultural change, where the need for change is addressed and there is determination of what needs to change. Specific duties here will include:

- Establishing terms of reference for the working group
- Establishing meeting times and locations
- Examining what data is already readily available
- Identifying areas where data is lacking
- Working with CID to create data reports specific to the desired data set of this working group (e.g., student recruitment, student retention, graduation rates, etc.)
- Establishing parameters to ensure student privacy is upheld

This step will require support by the Campus Vice-President and members of the working group. Ruben et al. (2017) discusses that the change process involves creating engagement and specifically involves engaging those who will be directly involved in the solution, as well as developing commitment from those that will be directly involved in the change process. From a human resource standpoint, aside from those on the working

group, there would need to be significant human resources from CID as mining institutional data can take significant time when done properly (Gottheil & Smith, 2011). The most significant resources here are time and personnel. It is anticipated to be approximately three hours per week for the working group members. The human resources needed from CID are unknown at this time and will be determined in consultation with CID. This step is anticipated to take one academic semester, for a total of four months.

Consideration to limitations and resistance for each step in the change process is vital to ensuring the greatest likelihood of a successful change (Deszca et al., 2019; Ruben et al., 2017). The anticipated limitations and resistance in Step 2 come from the fact that CID provides data and information to the entire institution. This type of data compilation and analysis would be a significant undertaking. For this reason, the request to CID for support of this project should come from the Vice-President. It is also important to be aware that, as outlined by Gottheil and Smith (2011), diving into institutional data can be a never-ending process. Often one set of data presents more questions than answers, so for this reason the working group must be very focused and set on exactly what type of data they want to explore before they begin the exploration process. If not, they risk spending an extensive amount of time digging deeper and deeper into the data without any meaningful analysis (Gottheil & Smith, 2011). Another significant limitation is regarding student privacy. Prinsloo and Slade (2014) caution that although institutions may have access to student data, it is imperative that Campus X have a critical lens with regards to the usage of student data and maintaining student privacy. Prinsloo and Slade (2014) state, “just because it is accessible, it doesn’t make it

ethical" (p. 199). Because Campus X is small, the concerns around data privacy must be a top priority. With smaller amounts of data inputs because of the small campus size, a deeper data analysis risks inadvertently identifying students based on their demographics (Prinsloo & Slade, 2014).

Implementation of this step is contingent on the flexibility of the working group members to be available for meetings, as well as the willingness of working group members to work hard to meet the goals of this step in the timeframe outlined. Utilizing the distributed leadership approach, meeting the goals will be the responsibility of all members of the working group (Spillane, 2005). There may also be implementation issues in working with CID to create data reports in a timely manner, as CID provides data and data reports for the entire University. The given timeframe may not be compatible with their workload. The final possible implementation issue is around establishing parameters to ensure student privacy. This would involve working with the privacy office. As with CID, the privacy office provides privacy services for the entire University and the given timeframe may not be compatible with their workload.

Step 3: Run Test Data and Document Data Analysis Process. This pushes us further into the mobilization stage of the Change Path Model (Deszca et al., 2019) as it moves into turning ideas into action. This process remains in the unfreeze step of Schein's (2017) model for cultural change. To meet the desired outcomes of this step, the working group will:

- Run test data on the reports created to ensure accuracy and that student privacy is upheld

- Document the data analysis process to ensure continuity in the reporting process regardless of turnover on the working group. The working group needs to ensure that from year to year the data is comparing the same data metrics

This step will require continued support and engagement from the working group, as well as significant support from CID. Consideration must be given to the key stakeholders in this step, specifically the students whose data is being utilized. Pardo and Siemens (2014) pose the question of who owns the data: the institution or the students? Students' data is the key to this process, and it must ensure that keeping their privacy at the forefront of what the institution is doing is a priority. Lewis (2011) warns of stakeholder's reaction in the change process and warns that a wide variety of reactions are plausible. In this case, in addition to the reaction of faculty and staff, the reaction of students, whose data we are using is to be considered. From a human resources standpoint, aside from those on the working group, there would need to be limited human resources from CID if the reports have been created appropriately. The most significant resources here are time and human resources. It is estimated that the working group members will spend approximately three-five hours per week on this project during this step. This step is anticipated to take one full semester, for a total of four months.

The limitations with this step are that its successful completion is highly based on the work of CID in Step Two. If the reports are created properly and in a timely manner, and are understood by the working group, then proceeding into this step should be easy. It will, however, be vital that the working group ensure that they stick to the data analysis that was outlined in Step Two. It is during this step that the working group could get

easily distracted and drawn into the never-ending vortex of data that Gottheil and Smith (2011) warn of.

Implementation of this step will be based on the depth and accuracy of the work completed in Step 2. If good data measures are not developed in Step Two, Campus X risks analyzing data that provides no value to the SEM process (Bontrager et al., 2012; Gottheil & Smith, 2011). Testing the data and data analysis will involve in-depth commitment from the working group members to ensure that the data reports and data analysis is accurate and captures the data that it is intended to capture. This step is vital to the change process. As Bontrager et al. (2012) outline, without good data, engaging in a SEM process would be futile.

Step 4: Plan for Communication/Dissemination of Data and Data Analysis.

Still remaining in the mobilization stage of the Change Path Model (Deszca et al., 2019), this step involves developing a plan to communicate the change. This step also prepares for the change phase of Schein's (2017) model for cultural change. In the change phase communication is key and this step allows for a well thought out and information-based process for communication. Communication is a vital step of the change implementation process. Lewis (2011) indicates information dissemination, when done appropriately, can result in a reduction of uncertainty among stakeholders. To meet the objective of this step, the working group will:

- Develop a template for a standardized presentation and brochure to be used year after year to communicate the data and the data findings to faculty and staff
- Confirm with the Vice President's office the date, time and location of the last Campus Council in the fall semester and get confirmation that this Campus

Council will be used every year to communicate the data and data analysis to faculty and staff

- Draft an email that will be sent to all faculty and staff immediately after Campus Council outlining the goal, process and where to view the findings
- Create a secure website, which is only accessible to faculty and staff, where the standardized presentation and handout are to be electronically stored
- Confirm with Deans the date, time and location of the individual school's Faculty Council meetings to present individual school data

How this change process is communicated to the Campus will directly impact how the change process is received by members of Campus. Ruben et al. (2017) outline how "process is often more important than content" (p. 217) in the change process, while Lewis (2011) indicates that the communication process involves interaction, discourse and interpretation. Communication process must be designed to allow for inclusion and engagement if they hope to be successful (Ruben et al., 2017). Ruben et al. (2017) state "failure to attend to process issues undermines and discredits decisions that would otherwise be embraced" (p. 217). For this reason, signification attention must be paid to not only what is communicated to Campus X, but perhaps even more importantly to how it is communicated.

This step will require continued support of the working group as well as additional support from the Campus Graphic Designer, the Campus Web Designer and the Department of Information Systems. For this stage of the change process, it is anticipated that the working group will continue to work on this project for approximately three-five hours per week, with the graphic designer working for

approximately five hours, the web designer working for approximately fifteen hours, and someone within the Information Systems Department investing approximately five hours. This step in the process is anticipated to take one semester, for a total of four months.

This step in the change implementation process is anticipated to face some limitations. Campus Council is only attended by a portion of the Campus faculty and staff. To overcome this, a plan to communicate to those not in attendance needs to be implemented. This is to ensure that those not in attendance get their information from a reliable source, such as a secure website, as opposed to possible slanted discourse on campus. Lewis (2011) outlines that communication takes place in formal and informal manners, with informal communications often having a larger impact on the change process. For this reason, immediately following the Campus Council, a well-articulated email should be sent to all faculty and staff with a link to the well-developed and self-explanatory website to ensure all stakeholder have equal access to the same information. This is in an effort to increase the likelihood of valuable informal communication. This process also supports the idea that for a message to be fully heard it must be delivered a number of times in a number of ways (Kotter, 2012; Ruben et al., 2017).

Implementation of this step will be contingent on the support that is provided by the Deans, Information Technology Systems team and the Graphic Designer. Numerous aspects of this stage will rely on the support of other departments which is why it is vital that this change process has the support of the Vice President, who can then provide directives to other departments on this project. An additional implementation challenge will be to find a way to communicate the data analysis findings that those within the institution can understand. Lewis (2011) indicated that leaders have to be careful not to

provide too much information as it can be overwhelming. This can be very true when it comes to technical institutional data, which risks equivocality, where the data has ambiguous meaning and there are too many ways to interpret it (Lewis, 2011). Equivocality can be avoided by providing clarity to the data that is being presented. If the data lacks clarity stakeholders may seek other sources for clarity (Lewis, 2011). Data, and data analysis, can often be a complex process, but must be communicated in a clear and accessible manner (Bontrager, et al., 2012) Those on the working group will likely be so immersed in the process that they will understand the data easily. The working group will want to have a small number of campus members who are not involved in the process look at data reports, using test data to ensure it is understood by the general Campus population.

Step 5: Run, Analyze and Capture Data from Previous Term. This step remains in the mobilization stage of the Change Path Model, turning ideas into action (Deszca et al., 2019). This step also aligns with the unfreeze step of Schein's (2010, 2017) model for cultural change; it allows the working group to ensure that the need for change is well informed. The data in this stage of the change process will continue to create a sense of urgency for the need to change (Kotter, 2012), as well as ensure that the Campus is well informed on the matter of strategic enrollment management (Bontrager et al., 2012). This will be accomplished by:

- In the fall term, collecting and analyzing the data from the previous academic year
- Conducting a general campus analysis as well as a school-specific analysis, by using the same process that was tested in step three and produce the same data metrics

- Using the presentation and handout template developed in step four and incorporating the data and findings
- Printing handouts for circulation

The key stakeholders here remain the working group members, CID, and the students whose data is being analyzed. This step will involve the continued approximately three-five hours a week of human resource time from the working group members. It will also require approximately ten-fifteen hours of human resource time from CID to extract the data. This step is anticipated to take approximately three months during the fall semester. There is limited cost associated with this change implementation plan outside of human resources, estimated to be less than $1000 for printing.

This step in the change process will hinge specifically on the work that has been done in Steps 1-4. If proper planning, troubleshooting and data interrogation has not taken place in the test phase, then this step may be futile. Implementation of this step will be contingent on the quality of work in Steps 1-4 and on the commitment of the working group to get this work done. There is not anticipated to be any significant challenges and limitations in this step.

Step 6: Communicate Data and Data Analysis to Campus. Moving into the acceleration stage of the Change Path Model, Campus X will work to engage others, build momentum and celebrate the success of the project to date (Deszca et al., 2019). This step also continues the process of change, as outlined by Schein (2017), as a vital step in the process of changing institutional culture with communication, involving people and powerful actions, as key steps in the part of the process. This will be accomplished by:

- Presenting the Campus findings of the data analysis to Campus Council
- Presenting the school findings to the appropriate Faculty Council
- Emailing out the web link where the process, objective and goal, along with data analysis, will be accessible for all faculty and staff

This step works to motivate action. As Ruben et al. (2017) outline, motivating action involves providing clarity on the intended outcome, it shines light on the current situation and the desired goal. Stakeholders in this step of the change implementation process include all faculty and staff as well as the students whose data has been analyzed. This step in the process requires the continued approximately three-five hours per week of human resource time, per member, from the working group. It will also require approximately five hours of human resource time for the Graphic Designer, Web Designer, and Information Systems Department to ensure that the findings from Step 5 are presented on the handout and website in a manner that meets the goals of clear and concise communication of the data and allow for multiple modes of delivery (Kotter, 2012). Because Campus Council is a regularly occurring event, the human resource time for faculty and staff to attend this meeting is not factored into this change implementation plan. This process is anticipated to take approximately one month.

The greatest challenge or limitation in this stage will be that of attempting to fully engage faculty and staff in this process. As Ruben et al. (2017) indicate, engagement in the change process is an important step. Transparency around the objective, process and goal will be key. Clarity of the process will prevent misinformation and allow for greater success (Ruben et al., 2017). It will be difficult to convince faculty and staff that eliminating programs or people is not the goal. The goal is to grow Campus X; however,

the current fiscal situation and the recent trend of position elimination will make it difficult to convince faculty and staff of this. To overcome this, the findings will not be shared with anyone outside of the working group. This will be done so that faculty and staff can be informed that the results have not be shared anywhere else (e.g., Deans, or Vice President) prior to Campus Council. This is to ensure there is no 'spin' on the findings or messaging and that the results have not been 'manipulated' by anyone within leadership. This mass communication model as presented by Ruben et al. (2017), ensures that everyone has equal access to the same information at the same time, allowing for true transparency. It also ensures that the knowledge and feedback from all parties are equally valued. Lewis (2011) states "by privileging the knowledge and information possessed by implementers and top-level decision-makers we may devalue knowledge and information possessed and created by other stakeholders" (Information Dissemination Section, para. 2). It will also be made clear that the scope of the working group is to analyze the data, ensuring decisions that are made based on the data are beyond the scope of the working group's mandate. Those decisions would lay with senior leadership. It is also anticipated at Campus Council that those in attendance will want further data, that they will want to move further into the 'data vortex' (Gottheil & Smith, 2011). It needs to be clearly communicated to the Campus Council that only data pertaining to the Campus, or schools, will be presented. If individual programs wish to delve deeper into their own data, the working group can assist them with how to do so, but the scope of the SEM working group is to present campus-wide/school data. With almost 20 degree programs, the working group will not have the capacity to dig deep into the data of each individual program.

Implementation of this step is seen as facing few barriers if the support of the Deans and Vice President is still strong. Their support will provide a gateway to appropriate communications. The working group will need permission to present at Campus Council as well as Faculty Councils for this step to be able to be implemented, which can be provided by the Vice President and Deans.

Step 7: Debrief on the Process with Feedback and Make Necessary Adjustment. Moving to the institutionalization stage of Deszca et al.'s (2019) Change Path Model, there is a continuation of engaging others in the process, beginning to track progress, and looking at necessary changes. In Schein's (2017) model for cultural change, this brings us to the change phase, where continued involvement of individuals is an important part of the process. This will be accomplished by holding a debrief meeting with Program Chairs, Deans, Vice President and the working group. Ruben et al. (2017) indicate that the debrief process is often the most overlooked step in the change process but is an important step if long lasting change is desired. The institutional data analysis process is to take place every year. A debrief will also take place to allow key members of the change process to address important question to allow the process to improve in subsequent years. Questions to considered as part of the debrief are "did your strategy achieve the outcome you intended?" and "what might you do differently in the future" (Ruben et al., 2017, p. 214).

This step in the change implementation process will require limited human resources. That would include a one-hour meeting with Program Chairs, Deans, the Vice President and the working group. The working group may have to provide additional human resources time if adjustments need to be made to the process based on the

feedback received. To ensure that the data presented, and the process is still fresh in everyone's mind, this debrief meeting should take place within one week of the Campus Council meeting.

The greatest limitation of this step is to ensure continuity of data reporting. Gottheil and Smith (2011) discuss the need to ensure that data that is compared is measuring the same data criteria, ensuring a continuity of the data measures. Changes to what is reported and how it is reported needs to remain consistent from year to year to allow for a historical context to shape over time (Gottheil & Smith, 2011). In the initial year, adjustments can be made; however, adjustments should not be made lightly, and, moving forward, adjustments should be extremely limited and highly justified. Implementation of this step will be contingent on the continued support of the Deans and Vice President to provide the push to Program Chairs to attend the debrief meeting. The working group must be prepared for some resistance at this meeting, like the anticipated resistance at the Campus Council and Faculty Council meetings.

Step 8: Repeat the Data Analysis and Communication Process on a Yearly Basis. The actions of repeating the yearly in-depth data analysis and communication is an effort to create a new norm and stability, which is part of the institutionalization phase of Deszca et al.'s (2019) Change Path Model. It also allows us to move into the refreeze phase of Schein's (2017) model for cultural change, which works to anchor the change in the culture and to work to sustain the change. This will be accomplished by repeating Steps 5 and 6 as outlined in this process on a yearly basis.

Because strategic enrollment management is a constant and ongoing process (Bontrager et al., 2012) Campus X will need to ensure the Campus continues to be

engaged with the institutional data. The goal is to have data-informed decisions become part of the culture at Campus X and this will not be possible if the data analysis process is not always ongoing. Key stakeholders in this process will remain all faculty and staff as well as students whose data is being considered. During the long-term process of repeating this analysis on a yearly basis, other stakeholders must be considered. These include investors, community members, government and future students. The goal of increased data-informed strategic enrollment management has positive implications for all these stakeholders (Bontrager et al., 2012).

The primary investment here will be during the fall semester of each year, with the working group providing approximately three-five hours per week of time to collect, analyse, compile and disseminate the data. Steps 5 and 6 should take place during the fall of each year, with Step 5 in September-November and Step 6 in December of each year.

The limitations here are the same as those listed in Steps 5 and 6, but also include the possible disengagement from faculty and staff if they do not see any action from the Campus administration to deal with issues in regards to student recruitment, retention and graduation rates that are brought to light by this process. This process will shine a light on the issues the data presents, but it will be up to campus administration to act on it.

Long lasting implementation of this step may be the most challenging of all. It will require continued support from senior leadership as well as a significant commitment from the working group, and their departments, to continue this yearly process. The greatest resource required for this change implementation plan is that of the time of current employees. It is vital that plans be put in place to ensure that extra work is not just piled onto individuals, that priorities are set and communicated. If this does not

happen, this change implementation plan can work to exacerbate the current distrust of leadership and frustration of staff and faculty with regards to workloads, and respect for employees. The implementation process of the change plan is vital to the change process. A clear 8-step process to implement the change has been outlined above. Campus X, however, must ensure that the process does not end there. The institution must make certain that it monitors and evaluates the change process to understand what aspects of the change process are working, to ensure change timelines are met and to keep everyone focused on the change goal.

Change Process Monitoring and Evaluation

The monitoring and evaluation of the change process is a vital step in any strategic enrollment management process (Bontrager, 2008; Bontrager et al., 2012; Gottheil & Smith, 2011). For this Organization Improvement Plan the monitoring and evaluation of two change processes will be considered, the yearly in-depth data analysis of institutional data, as well as the cultural shift towards a data-informed approach to enrollment management. The Plan, Do, Study, Act (PDSA) model for the monitoring and evaluation of the yearly in-depth data analysis will be utilized (Donelly & Kirk, 2015); things such as institutional engagement, discourse, as well as the impact, effectiveness, and efficiency of the change will be contemplated. Schein's (2017) ten-step model will be used to monitor and assess cultural change to have a greater understanding of the impact this change process has had on changing the culture at Campus X.

Employing the Plan, Do, Study, Act Model. The Plan, Do, Study, Act (PDSA) model (see Figure 3) is a four-step model that is frequently used to improve processes and fulfill a change process (Deming, 1986; Donnelly & Kirk, 2015). Widely regarded as an

effective model for the change process, the PDSA model proceed through four key steps (Donnelly & Kirk, 2015). The process invites us to consider:

- Plan: what is Campus X trying to accomplish?
- Do: how will Campus X try to accomplish it?
- Study: has the change resulted in the outcome Campus X desired?
- Act: How will Campus X improve its process? (Donnelly & Kirk, 2015)

The Plan, Do, Study, Act, model offers the change agent an effective way they can monitor change (Donelly & Kirk, 2015; Eckel, Green, Hill, & Mallon, 1999). The strength of this model is the cycle process builds in reflection, so the change agent can revisit the problem frequently as the change process evolves.

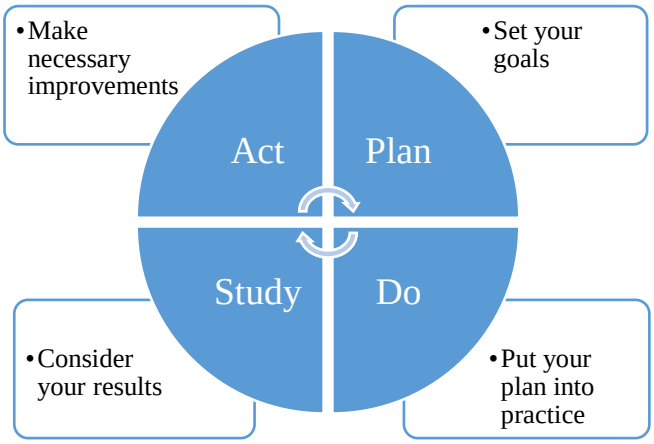

Figure 3. The PDSA Model for Change. Adapted from Donnelly & Kirk (2015), p. 279.

To fully engage in the PDSA model Campus X must work to build upon its existing networks and communities. Bryke, Gomes, and Grunow (2010) outline how the PDSA model can be best implemented through the utilization of existing networks and communities and the value of building new networks and communities to enhance the change process. It will be important for Campus X to understand how leadership and governance of these communities and networks function, as well as the role of informal

leaders within the networks and communities (Bryke et al., 2010). Utilizing these pre-established groups on campus to drive the change, specifically as it relates to changing culture, will allow the cultural change process to be broken down into smaller change areas, what Bryke et al. refer to as networked improvement communities. This makes the cultural change process more manageable and measurable.

The PDSA model is embedded in the change implementation plan outlined earlier in this chapter. Table 5 outlines how the Plan, Do, Study, Act model has been embedded within the change implementation plan. Each of the steps of the change implementation plan is well situated within one of the four stages of the PDSA model. The 'plan' process is embedded in Steps 1-4. In Steps 5 and 6 the 'do' process is utilized. In Step 7 the 'study' process is used, followed by the 'act' process in Step 8, outlined in Table 5.

Table 5

How the PDSA Model is Embedded within the Change Implementation Plan

Plan	Do	Study	Act
Step 1: Creation of the data analysis working group Step 2: Create roles, responsibilities, timeline and data measures for data analysis working group Step 3: Run test data and document data analysis process Step 4: Develop a plan for communications and dissemination of data and data analysis	Step 5: Run, analyse, and capture data from previous term Step 6: Communicate data and data analysis to the Campus	Step 7: Debrief on the process with Deans and Program Chairs and make necessary adjustments	Step 8: Repeat the data analysis and communication process on a yearly basis

Note. Adapted from Donnelly & Kirk, 2015.

Although the PDSA model allows for Campus X to monitor the change process to address the Problem of Practice of a lack of a data-informed approach to strategic enrollment management, the PDSA model can be supplemented by using additional measures to allow for greater success. Such measures will be discussed below.

Supplementing the PDSA Model. The PDSA model will be supplemented by also considering the institutional engagement and discourse on the matter of institutional data, as well as considering the impact, effectiveness and efficiency of the change process. The monitoring process differs from the assessing process, as monitoring looks specifically at engagement and discourse, while assessing change considers the impact, effectiveness and efficiency of change.

Barrett et al. (1995) researched the pivotal role discourse plays in the change process stating "we contend here that discourse is the core of the change process" (p. 353). Understanding the discourse at Campus X, and more importantly monitoring the change in discourse, will allow for a greater understanding of the depth of change. Barrett et al. outline that discourse and specifically changes in discourse is a key measure to the change process. This discourse outlines how those within the organization are thinking about and discussing the problem. Barrett et al. state "the most powerful change intervention is one that occurs at the level of everyday conversations" (p. 370).

The proposed change process is not valuable if there is no engagement from faculty and staff at Campus X. Ruben et al. (2017) outline that engagement is critical to both the likelihood and quality of the change process. Engagement in the change process, regardless of whether it is in a supportive or resistive nature, allows the change process to evolve (Ruben et al., 2017). It is through engagement in the change process and

discourse surrounding the problem that contributes to the evolution of the change process but can also be used to monitor the change (Ruben et al., 2017). Table 6 outlines how the engagement and discourse during this change process will be monitored.

Table 6

Monitoring Change Though Institutional Engagement and Discourse

Monitoring	Description	Measure
Engagement	How many people are engaged with the data, access the web page, attend the council meetings, and asks questions?	Have a recorder at each council meeting that records the type and number of questions. Ensure the website has a counter that records how many times the institutional data has been accessed.
Discourse	Are people talking about the institutional data outside of the scheduled discussion times?	Have working group members, Deans and the Vice President track/record the type and number of questions around the data or data implications in other campus meetings/gatherings

Note. Adapted from Angouir (2018); Barrett et al., (1996) and Ruben et al., (2017).

Through a series of questions and measures, as outlined in Table 6, Campus X will monitor the change process though the institutional engagement and discourse. This process provides clear guidance and measures to carefully monitor the change process (Angouir, 2018).

Campus X will not only monitor the change process but will also need to assess the change process. Monitoring takes place though observation, while assessment uses data to consider the depth of change. To assist in assessing the change process outlined in this change implementation plan, the impact, effectiveness and efficiency of the change is considered. If change does not have an impact, is not effective and is inefficient, then the change process is not working. Bontrager et al. (2012) indicate that without assessment

of institutional data a strategic enrollment management process is not possible. Ruben et al. (2017) indicates that impact can in some circumstances be difficult to measure, as it is often difficult to measure how far reaching the change process is, however, an assessment of impact is still vital to the change process. Without a wide-reaching impact, the change is unlikely to be successful (Ruben et al., 2017).

The effectiveness of the change process can also be directly measured using institutional data. In strategic enrollment management, there are many measures for effectiveness. These include graduation rates, retention rates, and student satisfaction surveys (Bontrager et al., 2012). Campus X can also look at the utilization of institutional data for decision making purposes to gage if the change is effective. The final assessment of change is efficiency, specifically were the budgetary, human resources and time goals met. Ruben et al. (2017) outline how institutional goals must not only meet the end goal but also need to be held to a budgetary and time standard stating "efficiency measures—focusing on resource utilization of time, money, and human capital—might provide a useful metric to include" (p. 287).

To ensure Campus X does not waste significant time and resources on a change plan that may not be working, it must regularly assess the impact, effectiveness and efficiency of the process. For this change implementation plan, this will be done in several different ways, with several different measures (see Table 7).

Table 7

Assessing Change though Impact, Effectiveness and Efficiency

Assessment	Description	Measure
Impact	The impact of the change is based on the goal. A goal of a more data-informed approach to enrollment management was identified.	-Data requests to the Registrar's Office -Data utilization by Campus departments
Effectiveness	Have the yearly data reports been effective in impacting the enrollment management though a more data drive approach?	Increases in: -Graduation rates -Enrolment Rates -Student Satisfaction -Greater utilization of resources for recruitment and retention initiatives
Efficiency	Were the change implementation plan's goal for resources and time met?	Clear and reasonable timelines that are checked monthly to ensure the project is on task and on time

Note. Adapted from Bontrager et al. (2012) and Ruben et al. (2017).

Monitoring and Assessing Cultural Change. This change implementation process is comprised of two key change areas; the yearly in-depth institutional data analysis, and the cultural change at Campus X as it pertains to data-informed strategic enrollment management. Measuring the tangible change of a yearly in-depth analysis of institutional data was discussed in the previous section. The more difficult process of measuring cultural change will be discussed below. Although there are numerous methods to monitor and assess cultural change, Schein's (2017) model which focuses on creating cultural change will be used. Schein (2017) outlines a10-step model to monitor and assess cultural change (see Table 1). Cultural change is often slow and the process of monitoring and assessing the change is normally repeated numerous times (Schein, 2017). In this change implementation plan, the goal is to begin the process to change the

culture at Campus X as it relates to a data-informed approach to strategic enrollment management. Schein's (2010) 10-step model can be utilized to monitor and assess cultural change to understand if the culture at Campus X is beginning to shift; however, it is understood that for true cultural shift to take place, the leadership at Campus X must be willing to explore and implement the other solutions presented in Chapter 2. The combination of the solution being implemented, along with the other solutions presented in Chapter 2, allows for the greatest likelihood of cultural change. It addresses the need for a data-informed approach to strategic enrollment management from many different perspectives at Campus X, involving faculty and staff, academic and non-academic units. Bontrager et al. (2012) explains how the strategic enrollment management process must encompass a wide variety of strategies and approaches to meet the institutional goal.

Using Schein's (2017) 10-step model for cultural change will allow Campus X the ability to work through a clearly defined process to gain an understanding of the depth of cultural change that is taking place. The cultural change assessment using Schein's (2017) model (see Table 1) allows for a discussion on how the artifacts, espoused values and shared assumptions have evolved during the change process. It also allows for a discussion on institutional aids and hindrances to the cultural change, promoting further discussion and possible implementation to allow for deeper cultural change. Although monitoring and assessing the change is vital to the change process, Campus X must also ensure that they have a plan to communicate the change and change process to the faculty and staff at Campus X. This change process needs the support of the faculty and staff, as the communication plan part of this process is vital to gaining that support. In the next

section the communication of the need for change and the change process will be discussed.

Plan to Communicate the Need for Change and the Change Process

Developing a strong and solid communications plan will be critical to the success of this change process and is a vital part of this Organizational Improvement Plan, as Ruben et al. (2017) states "leaders cannot not communicate" (p. 124). As Deszca et al. (2019) outline, in times of change, rumours and misinformation are often rampant, while Lewis (2011) warns of uncertainty among stakeholders due to a lack of communication. A strong and clear communications plan can work to overcome those rumours, misinformation and uncertainty. Lewis (2011) and Ruben et al. (2017) show nothing is more important than being clear on your communication plan. The communication plan to address the current Problem of Practice will be broken down into a two-step process, the first being communication and buy-in by senior leadership; the second will be communication and buy-in by faculty and staff at Campus X. Lewis (2011) outlines the importance of understanding the different stakeholders in the change process and addressing them separately in a manner that is appropriate.

Communicating with Senior Leadership. This Organizational Improvement Plan, and its success, is contingent on the buy-in from senior leadership, as Bontrager et al. (2012) indicate top level support is extremely advantageous in the strategic enrollment management process. If the Campus Vice-President and Campus Registrar do not see the importance and urgency for this change, then the change implementation plan risks lacking the supports and resources it needs to be successful. Buy-in from the Deans is also vital, as they are the avenue for appropriate communication with faculty. As the

primary change agent driving this change, it will be vital that my communications with these key stakeholders resonate with them and highlight the urgency of the need for change and the implications to the institution if it does not change (Ruben et al., 2017; Kotter, 2012). As Kotter (2012) outlines, this sense of urgency can be created by shining a spotlight on the financial implications, which in this case would clearly connect how increasing the enrollment through a more data-informed approach to strategic enrollment management will lead to fiscal gains.

Senior leadership as key stakeholders are viewed as the fuel of this change process. They have the authority to back this change implementation plan with the appropriate human and financial resources it requires to be successful. They also sit in a place of authority, where they can make this change process an institutional priority, and as Gottheil & Smith (2011) demonstrate for SEM to be successful it needs to be an institutional priority based on strategic institutional goals.

Gathering the Campus Vice-President, Campus Registrar, and Deans together for a meeting to discuss the Problem of Practice, and its scope, as well as the suggested solutions, the chosen solution and the change implementation plan, will be the first step in communicating this change process in an effort to create urgency (Kotter, 2012). I will need to be prepared to answer any and all questions and to ensure that areas of anticipated resistance have been addressed. The messaging needs to be focused and targeted, but not robotic and rehearsed. It needs to be clearly communicated to senior leadership that a significant amount of research has already taken place on this matter and they should know exactly what is expected of them from a financial as well as human resources standpoint (Bontrager et al., 2012). During the process of acquiring buy-in from senior

leadership a gatekeeper model of communication (Ruben et al., 2017) will be used. This gatekeeper model allows for specific communications to happen with a specific group for a specific reason. Once buy-in from senior leadership has been acquired, communication with those campus members who have been identified as part of the working group will need to take place. This communication will not need to be as well thought out as the communication with senior leadership. Those members identified for the working group have already identified this PoP as one which must address, and it is anticipated that buy-in from these working group members will be easily acquired. The key underlying message to both senior leadership as well as faculty and staff needs to be that this process is about improving the institution and increasing the institutional sustainability, connecting directly to the institutional mission and strategic plan. An understanding from faculty, staff and senior leadership that the data-informed strategic enrollment management process allows higher education institutions to work to meet their strategic goals in a more informed, intentional and integrated way (Hossler & Kalsbeek, 2008) will ensure the institution is working on its own sustainability and therefore working to meet one of the key institutional values.

Communicating with Faculty and Staff. The communication to faculty and staff will need to be much more thought out and strategic in its mode of delivery and timing. As DuFrene and Lehman (2014) state, “change is frequently stressful to those impacted, even when change is positive” (p. 477). To mitigate the stress of this change process, effective communication will play a key role (Ruben et al., 2017). Unfortunately, there are many factors that can complicate this communication process and interfere with the context. These impediments to effective communication can be as

simple as word choice or communication medium, or they can be as complex as the receivers' past experiences (Barrett, 2006). For this reason, it is vital that the communication of the change implementation plan ensures the current culture of distrust at Campus X is considered and work to overcome that distrust though a clear and transparent dialogue.

Considering the current culture of distrust of leadership at Campus X and the challenges of clear communication, a mass communication model may best address these challenges. Ruben et al. (2017) outlines that a mass communication model is a one to many model where communications take place in public forums, with the primary advantage being that everyone has equal access to information, takes less time and ensures that no one feels left out of the dialogue. The primary communications to faculty and staff will be three-fold. First, the context and scope of the problem must be communicated, as well as the chosen solution and the implementation plan. Faculty and staff will need to understand what the problem is, why it is a problem and how we intend to address it (Kotter 2012; Ramsden, 1998; Ruben et al., 2017). This communication, along with the data analysis findings, will be communicated in two ways. A campus Council meeting will be held, and the only focus of that meeting will be this change implementation plan. The communication will be purposeful, controlled and focused, while still being transparent and objective. It is important that the Vice-President not be informed of the data analysis findings prior to this Campus Council. It is important to ensure that everyone is on an even footing when it comes to considering this data, even the Vice-President. This will allow the working group to ensure the members of faculty and staff that the data has not been skewed in any way to meet anyone's particular needs.

It also needs to be recognized that only a small portion of the Campus faculty and staff attend Campus Council. For that reason, the second phase of the communication plan must be implemented immediately following the Campus Council meeting. As Ruben et al. (2017) states "a single message seldom has much impact" (p. 215).

Phase two of the communication plan to faculty and staff will be an email to all faculty and staff that will link to a well-developed website that outlines and communicates the context and scope of the Problem of Practice, the chosen solution and the implementation plan along with the data analysis. This email must be sent immediately following the Campus Council. The timing of this communication is vital, as it will serve to offset the amount of biased discourse from those who were at Campus Council to those who were unable to attend, and who therefore lack any context of the problem or solution presented. Lewis (2011) states "widespread dissemination of information to multiple stakeholders, repetition of messages, and making use of opportunities to communicate in everyday activities is also common advice" (Information Dissemination Section, para. 11).

The final phase of communication to faculty and staff will be through Program Chairs and Deans. The working group will be looking for feedback and a debrief on the data and data analysis. It is through feedback and debrief that the ongoing change process can continue to be strategic (Ruben et al., 2017). As well, it should be communicated to faculty and staff that this type of analysis may be possible within their schools, programs or departments. This will encourage faculty and staff to engage with the data and to consider how this type of analysis may be possible within the context and

nature of their position, continuing the engagement that Ruben et al. (2017) show as necessary for the change process to continue.

This multimodal approach to communication is to allow for the greatest likelihood that the message which is being sent is the one received. Klein (2006) has indicated that it is through message redundancy that a message's retention is increased. It is this redundancy that Reben et al. (2017) show is required to motivate change in behaviours or opinions. A multimodal approach allows different types of message receivers to obtain the message in numerous ways, increasing the likelihood of message retention.

Three-Step Process for Communicating Change. The above steps and phases of communicating change can be broken down into a three-step process: (1) understanding need for change; (2) understanding what needs to change; (3) adjusting change through feedback. This three-step process of communicating change is based in the work of Ruben et al. (2017) where they outline a communication process for strategic leadership. This process is the same for both senior leadership and faculty and staff. These three processes align with Schein's (2017) model for cultural change, with each step of the three-step change process aligning with the 'unfreeze', 'change' and 'refreeze' steps.

In the *understanding the need for change phase*, it must be ensured that senior leadership, faculty and staff understand what the problem is and why it is so important that the problem be addressed now. Kotter (1996) outlines extensively how it is vital that institutions understand why they must change and what the implications of not changing are. Ruben et al. (2017) indicate that the critical question is "what is at stake in this

particular situation?" (p. 211). This aligns with the unfreeze stage of Schein's (2017) model for cultural change, as it ensures that senior leadership, faculty and staff are ready for change. The implications of not addressing this PoP must be clear, but the working group must work hard to be as unbiased as possible and to consider the context of the problem from every possible angle.

In the *understanding what needs to change phase*, the working group will present the solutions that were considered, and the chosen solution, with a solid justification as to why that solution was chosen. Kotter (1996) indicates that knowing a change is required and knowing what needs to change are very different. Ruben et al. (2017) discuss the need for an understanding of the idea that once a problem has been identified how do you proceed. It is the understanding of what needs to change where the change process can make a significant misstep, if not properly considered. It is here that the working group would outline how this change will take place and the goal of the change. This aligns with Schein's (2017) change phase of the model for cultural change, where the Campus works to make the change happen. The working group needs to clearly articulate at this stage that although the working group is responsible for analyzing the data, they are not responsible for implementing changes as a result of the data.

In the *adjusting change through feedback phase*, the working group will provide an opportunity for faculty and staff, through their Program Chairs, Deans and Directors, to provide feedback on the process, thereby working to ensure that feedback is considered against the mandate of the working group and the goal of the implementation plan. Ruben et al. (2017) outline how the debrief and feedback process is often overlooked but is a valuable process if the change is to continue. This phase of the three-step

communication plan aligns with Schein's (2017) refreeze phase of the model for cultural change, as it ensures the change becomes permanent.

Although this OIP provides a solid plan to address the Problem of Practice of the lack of a data-informed approach to strategic enrollment management at Campus X, it is not without points of further considerations or the need for discussion on the next steps.

Next Steps and Future Considerations

This Organizational Improvement Plan is intended to focus on the lack of a data-informed approach to strategic enrollment management at a small Canadian university campus. Utilizing the leadership approaches of authentic (George, 2010) and distributed leadership (Spillane, 2005), and supplemented by appreciative inquiry (Cooperrider & Whitney, 2005), while viewing the problem though a cultural lens, two approaches to change were implemented: Schein's (2017) approach to cultural change, which is based in Lewin's Change Model (as cited in Schein, 2017), and Deszca et al.'s (2019) Change Path Model. Several solutions were presented in Chapter 2; however, the solution chosen was a yearly in-depth analysis of institutional data with regards to student recruitment, retention and enrollment. Although this solution was chosen, it is only a start to changing the culture at Campus X with regards to a data-informed approach to strategic enrollment management. If Campus X is to create deep cultural change related to data-informed SEM, it is recommended that all of the possible solutions be implemented over approximately a three-five year period.

One key limitation of this OIP is that it does not take into consideration the future fiscal issues that Campus X may experience. Although the change implementation plan requires very few resources outside of human resources, this change is only the beginning

of a much longer process. The process will need to take place over an extended period of time to engage the Campus in a data-informed approach to rectify the enrollment issues that exist at Campus X. Although attempts are made in this OIP to overcome anticipated resistance that stems from the distrust of leadership, and the feelings that exist around job/program security, if future cuts are made it may be impossible to convince the Campus that a data-informed approach is a solution, as opposed to a justification for further cuts.

Another key limitation of this OIP is my lack of ability as a change agent to go beyond institutional data analysis to create change. As mentioned above, this change process needs to be the first step in a long line of changes that will need to take place to reinvent strategic enrollment management at Campus X and an even longer line of change to create a meaningful cultural shift. The reinvention of strategic enrollment management at Campus X will not only take time, but it will take a financial investment beyond the scope of my budgetary control. It would be just that—an investment—one that would lead to future growth; however, the institution is in a very difficult financial situation and creation of new initiatives that take significant financial investments are no longer the norm. Change will require purposeful leadership from those in senior leadership positions and strategic enrollment management would need to become an institutional priority. The hope is that this OIP will create a sense of urgency for that further change and will spark the beginning of that process.

Moving to Anticipatory Enrollment Management. As this PoP is considered and the desired change takes place, it must be ensured that the consideration of this PoP does not end there. The process of data-informed strategic enrollment management is not a single cycle or a single process (Bontrager et al., 2017; Gottheil & Smith, 2011). It is

an ongoing process that must always be considered. If there is a point in time when Campus X feels they have a significant understanding, utilization and implementation of the data-informed strategic enrollment management process, it would be valuable to consider additional processes, such as anticipatory enrollment management (AEM) (Dennis, 2012).

AEM allows for a more significant evaluation and engagement in enrollment management. Specifically, it works to anticipate future institutional enrollment. Dennis (2012) provides an overview of the AEM process and how it can be of significant value to higher education institutions. This process would enable universities like Campus X to know and understand the changes in student demographics before they happen, allowing the institution to respond and prepare for changes. Institutions can then be proactive in their support and services, as opposed to reactive, with the goal of increasing student success and satisfaction as well as more responsible financial spending and financial stability. The strategic enrollment management process is about responding to the current trends in higher education while the AEM process is about responding to the future trends, giving institutions foresight in what is to come.

Privacy Policy as it Relates to Data Driven Strategic Enrollment Management. Campus X needs to be using student data as a driving force in recruitment, retention, enrollment management and student success efforts. Campus X must be able to clearly define student privacy as it relates to student data and must have a clear understanding of who owns the student data (Young & McConkey, 2012). Although higher education institutions are often blanketed with multilayers of policy related to privacy and data

management, the literature clearly shows a specific need for greater defined policies related to the use of student data for institutional advancement (Prinsloo & Slade, 2013).

If Campus X is to continue towards a culture of data-informed strategic enrollment management it must ensure that the policies and procedures pertaining to student data collection, usage and storage are reviewed and updated on a regular basis (Prinsloo & Slade, 2013; Young & McConkey, 2012). Leadership must also ensure that those working with the student data are not only aware of the policies and procedures, but that they also ensure policies are closely abided.

Concluding Reflections

This Organizational Improvement Plan has presented the Problem of Practice of the lack of a data-informed approach to strategic enrollment management at Campus X. It has provided an organizational context, which allows the reader to understand the context of this PoP as it relates to Campus X. The nature of the PoP was considered from several standpoints, including economic, political, social, environmental and technological. The key guiding questions that have emerged were also addressed. The nature of this research is on leadership through a change process to address the PoP, so a leadership vision for change was also presented, outlining where Campus X is now and where it hopes to be after this change process. Chapter 1 concludes by considering the change readiness of Campus X to embark on this change process.

Moving into Chapter 2, leadership approaches to this change process, specifically authentic (George, 2010) and distributed (Spillane, 2005) leadership, were presented. Several change process models are presented to address the Problem of Practice, specifically Deszca et al.'s (2019) change path. The work of Schein (2017), as it relates

to changing institutional culture, was also examined. After considering several leadership approaches and change models, a number of possible solutions to address the Problem of Practice of a lack of data-informed strategic enrollment management at Campus X were presented. Chapter 2 concluded with an in-depth look at the ethical considerations in this change process.

Chapter 3 moves into the implementation stage of the change process. It was examined how the change models and the leadership approaches presented in Chapter 2 can work together to guide a change implementation plan to address the Problem of Practice. The PoP was addressed through an 8-step change process that is rooted in authentic (George, 2010) and distributed (Spillane, 2005) leadership, while applying the change process in the work of Deszca et al. (2019) and Schein (2017). The change process, however, does not end with implementation; consideration must be given to how the institution will monitor and evaluate the change process. It was outlined how the Plan, Do, Study, Act model will be used to monitor and evaluate how the change process at Campus X is progressing. Finally, a plan to communicate this change process, and the importance of communication for addressing this PoP, was discussed. This research concluded by addressing future considerations and anticipating the next steps.

Campus X is at a crossroads, with stagnant enrollment, significant fiscal cuts and the ever-evolving nature of higher education in Canada. Campus X can choose to continue to do what it has done for the past number of decades and continue to have lack-luster results, or Campus X can take charge of its future and engage in a process that allows for an understanding of their students and their institution more fully. Campus X can no longer sit by and hope that students show up at their doorstep.

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Appendix A
Change Implementation Plan

Solution for Change: (Chapter 2 – what solution was chosen to implement?)
Yearly in-depth analysis of institutional data in regards to student recruitment, retention and enrolment.

Goals/ Priorities	Implementation Process	Implementation Issues /Limitations	Supports/ Resources	Stakeholders/ Personnel	Timeline
Step 1 **Creation of the data analysis working group**	Formation of a working group which will be responsible for the data analysis at Campus X is the primary step. The working group should be comprised of myself as the key change agent, the Campus Registrar, a representative from student recruitment, and a representative from Center for institutional data. This should be accomplished by: • Gain support from the vice president (this is not anticipated to be an issue) • Gain support from the Campus Registrar (who oversee the Registrar's Office, Student Services and Student Recruitment). • Gain support from Deans, as individual school data is to be gathered and presented to the schools. • Identify what representatives from the Registrar's Office and Student Recruitment will sit on the committee.	Implementation of this step is fully contingent on the buy in from the Campus vice-president, campus registrar and the deans Campus X is already viewed as having too many committees. And there may be some resistance to the creation of another committee/working group. In contrast to the above noted limitation, it is often the case at Campus X that everyone wants representation on committees/working groups. It is anticipated that there may be some resistance to the fact that there are no faculty on the committee. This will be mitigated by clear communication on the role of the working group as analyzing data. What the data is then used for (what changes take place based on the data) will be beyond the scope of this working group.	Key support here will be the Vice President and the Registrar The key resource here will be a small amount of time to meet with the Vice President and the Registrar and Deans Human resources time is anticipated to be a ½ hour meeting with the VP, Deans, Registrar and Change agent (myself)	Change Agent (Myself) Vice President Registrar Representative from Student Recruitment Representative from Centre for institutional data (CID) Deans	Last week of August/First week of September 2020

Goals/ Priorities	Implementation Process	Implementation Issues /Limitations	Supports/ Resources	Stakeholders/ Personnel	Timeline
Step 2 **Create roles, responsibilities, timelines and data measures for data analysis working group**	Specific duties here will include: • Establishing terms of reference for the working group • Establishing meeting times and locations • Examining what data is already readily available • Identify areas in which data is lacking • Work with CID to create data reports specific to the desired data of this committee (student recruitment, student retention, graduation rates, etc) • Establish parameters to ensure student privacy is upheld.	CID provides data and information to the entire institution. This type of data compilation and analysis would be a significant undertaking. For this reason the request to CID for support of this project should come from the Vice President. The working group must remain focused on the goal, if not they risk spending too much time digging deeper and deeper into the data for an extensive period of time. Data privacy must be a top priority Flexibility of the working group to meet, and the willingness of members to get the work done in the outline timeframe. This process is contingent on the ability of CID to work within the timeframe.	From a human resources standpoint aside from those on the working group there would need to be significant human resources from CID The most significant resource here is time and human resources. It is anticipated to be 3 hours per week for the working group members. It is unknown at this time the human resources needed from CID.	Change Agent (Myself) Vice President Registrar Representative from Student Recruitment Representative from CID Representative from Privacy Office	One academic semester – Fall 2020

Goals/ Priorities	Implementation Process	Implementation Issues /Limitations	Supports/ Resources	Stakeholders/ Personnel	Timeline
Step 3 **Run Test Data and Document Data Analysis Process**	Specific duties here will include: • Run test data on the reports created to ensure accuracy and student privacy is upheld. • Document the data analysis process to ensure continuity in the reporting process regardless of turnover on the working group. The working group needs to ensure that from year to year the data is comparing "apples to apples"	This is based on the timeliness of the creation of the reports, and the level of detail to which the reports have been created. Implementation of this step will be based on the depth and accuracy of the work completed in Step 2.	From a human resources standpoint aside from those on the working group there would need to be limited human resources from CID if the reports have be created appropriately. The most significant resource here is time and human resources. It is estimated that the working group members will spend 3-5 hours per week on this project during this phase.	Change Agent (Myself) Registrar Representative from Student Recruitment Representative from CID Students whose data is being analysed	One Academic Semester – Winter 2021
Step 4 **Develop a plan for communication & dissemination of data and data analysis**	Specific duties here will include: • Develop a template for a standardized presentation to be used year after year to communication the data and the data findings to faculty and staff • Develop a template for a standardized handout/brochure to be used year after year to communicate the data and the data findings to faculty and staff • Confirm with the Vice President's office the date, time and location of the last Campus Council in the fall semester and get confirmation that this Campus Council will be used	Campus Council is only attended by a portion of the Campus Council. So other methods of communication need to be developed Only data pertaining to the entire campus will be presented at Campus Council, school specific data will be presented at individual Faculty Councils. Implementation of this step will be contingent the support that is provided by the deans, information systems team and the graphic designer. Numerous aspect of this stage will rely on the support of other departments.	Human resources with an anticipated 3 hours per week by those on the working group 5 hours of human resources time for the graphic designer 15 hours of human resources time for the web designer 5 hours of human resources time for Information Systems Team	The Working group Campus Graphic Designer (for handout) Campus Web designer (for Website) Information Systems team to set up secure website	One Semester – Summer 2021

Goals/ Priorities	Implementation Process	Implementation Issues /Limitations	Supports/ Resources	Stakeholders/ Personnel	Timeline
	every year to communicate the data and data analysis to faculty and staff. • Draft an email that will be sent to all faculty and staff immediately after Campus Council outlining the goal, process and where to find the findings. • Create a secure (only accessible by faculty and staff) website where the standardized presentation and handout are to be electronically stored. • Confirm with Deans the date time and location of the individual schools Faculty Council meetings to present individual school data.	An additional implementation challenge will be to find a way to communicate the data analysis findings that those within the institution can understand. We want to ensure that data is accessible, but in a way that is clear.			
Step 5 **Run and analyse data and capture from pervious term**	Specific duties here will include: • A outlined in the plan from the fall 2020 term, collect and analyze the data for the 2019-2020 academic year. • Conduct a general campus analysis as well as school specific analysis. Using the same analysis process and producing the same data metrics • Using the presentation and handout template incorporate the data and findings. • Print the Handouts for circulation	This process will hinge specifically on the work done during the previous year, if proper planning and troubleshooting of the data and data analysis in the test phase was not done, then this phase may be futile. Implementation of this step will be contingent on the quality of work in steps 1-5 and in the commitment of the working group to get this work done.	This step will involve extensive human resources from the working group members, estimated to be 3-5 hours per week per member. This step will also require a small amount of time (10-15 hours) from CID to extract the data	Working group members CID Students who data is being analysed	3months (September-November 2020)

Goals/ Priorities	Implementation Process	Implementation Issues /Limitations	Supports/ Resources	Stakeholders/ Personnel	Timeline
Step 6 **Communicate data and data analysis to campus**	Specific duties here will include: • Present the Campus findings to Campus Council • Present the school findings to individual Faculty Councils • Email out the web link where the process, objective and goal along with data analysis will be accessible for all faculty and staff.	The greatest resistance is expected at this stage as we fully engage faculty and staff in this process. Transparency around the objective, process and goal will be key. Ensuring that the goal here is institutional growth, not the elimination of programs/faculty/staff will be a difficult sell based on the recent trends at the Campus and the current fiscal situation. Implementation of this step is seen as facing few barriers if the support of the deans and vice president is still strong. The working group will need permission to present at Campus Council as well as Faculty Councils for this step to be able to be implemented.	This step will involve limited human resources time from the working group 2 hours per presentation for a total of 10 hours per working group member. This process will however require the gathering of faculty/staff at Campus Council and school based Faculty Council (although these meetings of campus already take place so it is not an addition to required human resources time)	All Faculty and staff Students who data is being analysed and presented	1 month – December 2020
Step 7 **Debrief on the process with feedback from deans and program chairs and make necessary adjustment to the data process.**	Specific duties here will include: • Hold a debrief meeting with Program Chairs, Deans, Vice President and the working group.	The greatest limitation of this step is that to ensure continuity of data reporting, changes to what is reported and how it is reported needs to remain consistent from year to year to allow for a historical context to shape over time. In the initial year adjustments can be made, however adjustments should not be made lightly and moving forward adjustments should be extremely limited and highly justified. Implementation of this step will be contingent on the continued support of the	This step will require limited human recourses, which would include a one hour meeting with program chairs, deans, the vice president and the working group. The working group may have to provide additional human resources time if adjustments need to be made based on the feedback received.	Working group Deans Program Chairs Vice President	Meeting to take place in December 2020

Goals/ Priorities	Implementation Process	Implementation Issues /Limitations	Supports/ Resources	Stakeholders/ Personnel	Timeline
		deans, and vice president to provide the push to program chairs to attend the debrief meeting. The working group must be prepared for some resistance at this meeting, similar to the anticipated resistance at the Campus and Faculty Council meetings.			
Step 8 **Repeat the Data analysis and communication process on a yearly basis**	Specific duties here will include: • Repeat Steps 5 and 6 as outlined in this process on a year basis.	The limitations here are the same as those listed in Steps 5 and 6 but also include: Possible disengagement from faculty and staff if they do not see any action from the Campus administration to deal with issues in regard to student recruitment, retention and graduation rates that are brought to light by this process. Long lasting implementation of this step may be the most challenging of all. It will require continued support from senior leadership as well as a significant commitment from the working group, and their departments to continue this yearly process.	The primary investment here will be during the fall semester of each year with the working group providing 3-5 hours per week of time to collect, analyse and compile and disseminate the data.	All Faculty and Staff Students who's data is being consider Financial contributors to Campus X	Step 5 should be Sept –Nov each year Step 6 should be Dec of each year

Appendix B
SMART PLAN

In what ways is your plan SMART?	
SPECIFIC – Goals should include strategies and details (Who, what, how etc.).	Solution: yearly in-depth analysis of institutional data in regards to student recruitment, retention and enrollment • Formation of a working group will be required to complete this work. The working group should be comprised of the Campus Registrar, myself as coordinator – Registrar's Office, and a representative of student recruitment. A representative of the center for institutional data (CID) (note name is change for anonymization purposes) will also be needed during the first year, as the expertise and knowledge around the current data management system is within CID. • The working group will take the first 4 months of the 2020 academic year (September –December) to outline exactly what data is to be evaluated and how and data report will be created. During the winter term (January –April 2021) the data requested will be evaluated (test phase), and any additional adjustments and clarifications will be made. During this period the exact process will be documented. • Early fall 2021 a message should be circulated to all faculty and staff outlining the work that has been done, the date of the Campus Council meeting and the goal of informing the Campus of the current status in terms of enrollment (recruitment and retention). • The fall 2021 semester the working group should then run the reports for the previous academic year and analyze them as determined (In fall 2021 the data being analyzed would be for the 2020-2021 academic year). An in-depth presentation, and handout is to be created with the results of the data analysis with clear indication of what exactly the data represents. • Late fall 2021 the working group is to present the data analysis to Campus Council and Faculty Councils, allowing for significant time for questions.
MEASURABLE – How will you know you are making progress?	• Currently the yearly data that is presented to campus is minimal. It typically only includes enrollment, information such as total enrollment, the number of students in each year of study (year 1, year 2, year 3 and year 4) and number of international students. The data analysis proposed to be presented would be significantly more extensive, including year to year retention rates, graduation rates, applicant rates all of which will be considered for the entire population but also sub groups (international, transfer students, mature students, etc) • Success will be measured by the product that is produced. In the fall of each academic year, a Campus Council meeting will be held to disseminate the findings of the previous year. Hard copies of the data will be circulated, and electronic copies will be available for internal use only. • Because data can so easily be manipulated to reflect the message you want it to reflect, transparency will be key. Ensuring that there is a clear understanding of what the data represents will be vital. This will be measured by the number of questions asked at Campus Council specifically related to providing clarity on the data.

ATTAINABLE - Is your goal realistic given resources available?	• This goal is very much attainable, it will require a coordinated effort between student recruitment the registrar's Office and the center for institutional data. • The biggest resource needed here is time. Time will be needed to figure out exactly what data needs to be analysed and then specific reports will need to be created to extract that data from our data management system. Once this takes place, the yearly compilation and reporting will become standardized and will provide a historical context/trends, etc.
RESULTS – What are the anticipated outcomes?	• The anticipated results are a more informed campus in regards to our current enrollment situation (recruitment and retention). • It will hopefully create the sense of urgency on campus in regards to our enrollment. As outline in Kotter's model for change a sense of urgency is needed for successful change (Kotter, 1996), and this yearly data analysis will hopefully create that sense of urgency and will be the first step in moving the Campus to a more data driven approach to strategic enrollment management.
TIME BOUND –State when you expect to accomplish the goal.	• It should take one year of "planning", determining what data needs to be analyzed, how it will be analyzed, and report in the data management system to be written, and a test phase for the data. • After one year, the ground work should be done and the level of work required to maintain the reporting structure should be significantly less than in the planning year. • The work will be ongoing on a yearly basis, but the planning and set up time should be approximately one year, and then the yearly reporting should take place once a year, with the working group regrouping each fall to analyze and present the data.